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BUILDING THE AIR FORCE:  
MAJOR GENERAL MASON PATRICK AND THE ARMY AIR SERVICE

by

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A RESEARCH REPORT SUBMITTED TO THE FACULTY

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## **ABSTRACT**

**TITLE:** Building the Air Force: Major General Mason Patrick and the Army Air Service

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As Chief of the Army Air Service from 1921 to 1927, Major General Mason Patrick led the establishment of the Air Service as an institution and pushed forward recognition of air power doctrine as a major part of warfare. He assumed command with the air arm in chaos after the demobilization following World War I and tackled problems in two main areas: doctrine and the fight for autonomy, and laying the bureaucratic foundation for the continuance of branch as an institution. Working within established channels as opposed to the public rhetoric of air power zealots such as Brigadier General Billy Mitchell, Patrick made major strides in advancing the Air Service toward its goal of independence. The Air Corps Act of 1926 was Patrick's crowning achievement proving his abilities as a leader worthy of study.

## **BIOGRAPHICAL SKETCH**

Lieutenant Colonel Bruce A. Bingle (MA, Military History, Ohio State University) has studied the personalities in early air power history for nearly twenty years. A career intelligence officer, he has served field tours at all levels from branch chief to squadron commander. He also served a four year tour on the Air Staff. Lieutenant Colonel Bingle is a graduate of the Air War College, class of 1995.

# CHAPTER I

## INTRODUCTION

The more things change, the more they stay the same. A famous cliché, but one that is relevant to today's Air Force. Since the end of the Cold War, the Air Force has undergone immense changes and continues to face major challenges. Almost every senior leader who addresses the Air War College begins his speech with a recounting of the changes in the world situation and how the US military establishment has responded since the end of the Cold War. And indeed, the Air Force as an institution does face challenges in many areas: the Roles and Missions Commission is examining core functions and doctrine of the Service, the budget continues to shrink, personnel policies effect the quality of life, the military industrial base is under immense pressure, equipment procurement procedures are under constant scrutiny, and the organizational structure itself is constantly shifting. But are these in fact new challenges? Is the Air Force institution facing situations never before encountered?

Far too often our focus on the present blinds us to the past and we fail to learn from the lessons available through the study of history. Although the challenges the Air Force faces today seem to stem from recent events, they are in fact ones that have been with the Air Force since the earliest days of military aviation. The problems only appear to be new because succeeding generations of service members fail to study and learn the details of the tribulations of their predecessors. Too often the focus is on the present—getting results for today—leaving little time for studying of the past's rich legacy. As a result the lessons learned by leaders of the past quickly fade from memory and we find

ourselves renegotiating ground already covered although we interpret it as pathfinding through a new wilderness.

Such is the case of Major General Mason Patrick. While Patrick Air Force Base, Florida is named for him, few know of him or the details of his service. He remains an obscure figure even though his six year tenure from October 1921 to December 1927 as Chief of the Air Service and then as the first Chief of the Air Corps makes him the longest serving "Chief of Staff" in U.S. Air Force history—if Army and Air Force purists will permit the liberty. As Chief of the Army Air Service he laid the foundation for today's Air Force during some of the most challenging and controversial years in our history.

Patrick tackled two major challenges during his tenure. While each was significant in its own right they were intertwined and sometimes presented conflicting pressures. That Patrick achieved measurable success in each area while balancing the unique demands of each reflect his impressive skills as both leader and bureaucrat. The first challenge, and of course the most familiar to current Air Force members, was the fight for autonomy of the air arm and recognition of the airplane as a new medium of warfare with a unique doctrine. Led by outspoken and flamboyant Brigadier General Billy Mitchell, air enthusiasts clamored for recognition of air power as an armed service on equal par with the Army and Navy. As the head of the Air Service, Patrick was a key player in the debate. While Patrick shared the vision of a separate air arm, he tempered the speed of his push for autonomy based on the realities of the bureaucratic politics in the defense establishment. He saw his larger challenge as establishing the Air Service as a viable, sustainable bureaucratic entity. Working within the existing military establishment he had to create an entirely new branch, competing for scarce personnel, funds, and equipment.



Patrick astutely recognized the requirement to work within the system—the President, Congress, the Secretary of War, and the Army General Staff—to achieve institutional identity even as more radical airmen castigated and alienated the establishment. Finally, Patrick had to foster the development of a strong civilian aviation industry. He firmly believed from early in his tenure that a strong military air arm had to be based on a solid civilian defense industry. The aircraft production experience in World War I demonstrated the crucial need for an existing aviation industrial base if the country had to mobilize quickly again. Of course all these tasks were made all the more difficult in the setting of the 1920's: an era of government fiscal austerity and a national mood of pacifism and isolationism.

This paper will examine the contributions of General Patrick to the development of the U.S. Army Air Service during the 1920's. While the questions of autonomy and doctrine fueled fierce debate about the proper use of air power, building the basis for a permanent institution was just as, if not more, important. By the time Mason Patrick relinquished command of the Air Corps, he had successfully established a solid base of support of military aviation within the decision making establishment as well as outside it. The Air Corps Act of 1926 was the capstone of his work and can be the benchmark of his success. While the Act did not achieve all the results Patrick and other air power proponents desired, it was the first major step toward institutional stability and eventual autonomy. Without Mason Patrick's steady guiding hand during the turbulent 1920's the progress would have been much more chaotic. His key contributions to Air Force history and the lessons his leadership provide can be used when addressing today's challenges

which echo the same issues he faced in the 1920's. Mason Patrick deserves much wider recognition and appreciation for his dedicated service.

## CHAPTER II

### MASON PATRICK, THE MAN

No one was more surprised at being thrust into aviation than Mason Patrick. Yet the man who commanded the Air Service/Corps during the turbulent twenties was a unique mix of conservative and progressive that was exactly what the Air Service needed. His long career had made him the epitome of the Army team player, but he still had the flexibility to recognize the importance of what the airplane meant to warfare. The Army leadership may have selected Patrick "to come in and shake the foolishness out of this new service and sit on the lid,"<sup>1</sup> but the Air Service gained a staunch supporter and a man with immense abilities of command and administration developed during an Army career that had already covered thirty-five years.

Born on December 13, 1863, in Lewisburg, West Virginia, Patrick grew up the son of an ex-Confederate surgeon, was educated in the Lewisburg public schools and entered West Point in 1882.<sup>2</sup> He was extremely intelligent and excelled in the rigorous environment of academic challenge and military discipline. The harsh conditions were fundamental in shaping his character, instilling a sense of discipline, integrity, and hard work. He later advised a young man thinking about attending the academy:

I know of no other institution where a young man is judged so entirely by what he really is; he stands on his own feet; he makes for himself his place as a student and among his fellows. There are no easy paths which lead to favor. It is hard work which counts.<sup>3</sup>

Graduating second of in his class, Patrick earned the right to pick his branch of service and selected the highly coveted Corps of Engineers. Fellow classmates John J. Pershing and

Charles T. Menoher were assigned to the infantry, but would cross Patrick's path in the future.<sup>4</sup>

For thirty-two years Patrick followed the normal career path of an engineering officer. He performed river and harbor construction work along the East Coast and the Mississippi River and taught at West Point twice. From 1901 to 1903 he served in Washington, DC as the Assistant to the Chief of Engineers, giving him his first taste of the politics of the capital. Rising through the ranks he assumed greater responsibilities, serving as the chief engineer for the Army of Cuban Pacification and eventually winning promotion to full colonel in 1916 when he was charged with organizing the 1st Regiment of Engineers to support Pershing's Mexican expedition. The U.S. entry into World War I soon overshadowed the border affair and heralded major changes in Patrick's career.<sup>5</sup>

Arriving in France in August, 1917, Patrick was promoted to Brigadier General and held a succession of engineering jobs increasing in scope as the size of the American effort rapidly expanded. Eventually he was responsible for construction of all ports, railroads, depots, and airfields needed to accommodate the two million Americans in France.<sup>6</sup> In May, 1918, however, General Pershing plucked him out of familiar surroundings and thrust him into the job that set the stage for command of the Army Air Service in the 1920's.

On May 10, Patrick was called into Pershing's office. Assuming the general wanted to check on the progress of construction, Patrick was prepared with blueprints and reports. After a few preliminary remarks, however, Pershing unloaded the surprise:

The fact is I am entirely dissatisfied with the way the aviation service is getting on and I want to put you at the head of it and have you bring order out of what is now chaos, have you manage it and get results. There is

bickering, they are all running around in circles. There is need for a man to take hold of it and whip it into shape. I want you to do this for me. This is no sudden thing. I have gone over in my mind all the men over here and men who are at home. I know what you have done and of all the men I can get. I am convinced that you are the best one I can find for this job. I know how big it is. It is the biggest thing over here and I am proposing to give you a huge task.<sup>7</sup>

Patrick was flabbergasted, "Never in my life did anything surprise me more. During all my years of service I had been doing engineering work and knew nothing whatever of aviation."<sup>8</sup> But Patrick's inexperience did not concern Pershing:

You lack only one thing. You do not know how to fly. You are not a flyer, but I do not want a flyer. I can get plenty of them. I want a man on the ground. A man whose feet are firmly planted, one who will know what to do and how to do it.<sup>9</sup>

Pershing, a longtime friend of Patrick's, recognized his superior abilities to organize, administer, and command, which were obvious from the successes he achieved in developing the massive support base for the AEF.

Patrick took the job with reservations and was promoted to Major General. He immediately identified the problems that had so concerned Pershing. He saw that Brigadier General Benjamin Foulois's Air Service staff violated all rules for a tight knit group. "While each one was working hard, he did not know how what he was doing fitted in with the work of others. It was a chaotic condition of affairs."<sup>10</sup> The problems stemmed from the personality conflict between Foulois, who had arrived in France to take over the Air Service at a rather late date, and Brigadier General Billy Mitchell, who had been the first Air Service officer in France and resented being displaced. The flames were fanned as Foulois, displaced by Patrick, moved down and again ousted Mitchell as commander of the Air Service for the First Army. Eventually Foulois recognized

Mitchell's excellent qualities as a combat commander and voluntarily returned to AEF Air Service headquarters as Patrick's assistant.<sup>11</sup>

Beside quelling personality clashes, Patrick also instilled planning and organizational discipline. He ordered a careful study of what the Air Service could realistically be expected to accomplish in the war based on aircraft production and pilot training capacities and cut earlier extravagant plans for 358 squadrons to 202.<sup>12</sup> When the war ended the AEF Air Service was an efficient, well run unit with a respectable record.

After the war, Patrick established Air Service bases in the occupied regions of Germany, conducted demobilization of the remaining air units, and served on the U.S. peace negotiating commission. In July 1919 he returned to the United States, reverted to his permanent grade of colonel, and returned to the Corps of Engineers. In June 1921, Patrick became commander of the Engineering School outside Washington, DC. Only six years from mandatory retirement age, he settled down in the rustic setting and prepared to enjoy a leisurely ending to his long career.<sup>13</sup>

Patrick's hope for calm came to an end after just three months. Near the end of September 1921 the General Staff notified Patrick he had been recommended to the President as the next Chief of the Army Air Service. The previous chief, Major General Charles Menoher, had been unable to handle the irrepressible Billy Mitchell and was being transferred to other duties. Patrick's first reaction was to refuse the assignment. "I was very loath to accept it. It was known that the Air Service was greatly disorganized; whoever was placed at its head would have to straighten out a tangled mess."<sup>14</sup> In the end Patrick's professional dedication overcame his apprehensions and he pinned two stars back

on and took office on October 5, 1921. The next six years would be "the most strenuous, most interesting years" of all his life.<sup>15</sup>

Patrick's career made him a logical choice to head an organization besieged with internal problems. After proving himself an able engineer, he developed into an efficient administrator. His success in France was the capstone proving his abilities to handle units, personnel, and equipment. Thirty years of army experience had instilled a strong commitment to standard operating procedures, efficiency, discipline, and the status quo. The language of his letters gives the impression of a very proper, polite man. He was very direct and wasted few words.<sup>16</sup> Few letters used the addressee's first name and those that did were to close family members or longtime friends. Patrick was also an accomplished speaker, a skill he would use widely as Chief of Air Service. Ira Eaker would later call him "perhaps the finest military orator of his time, save Douglas MacArthur."<sup>17</sup>

Patrick, however, was not just a paper pusher behind a desk. He also displayed the ability to effectively handle men and inspire their respect. Patrick led with a firm, but fair hand. Benjamin Foulois recalled: "Although I did not always win my arguments with him, he always heard me out and then pointed out where my argument was weak. As a result, he was a great teacher and leader."<sup>18</sup>

Another example of Patrick's abilities was his handling of Billy Mitchell. Mitchell had returned from France a well known, popular leader and expected to be named to head the Air Service. When General Menoher was appointed over him he Mitchell made Menoher's life miserable and had prevailed in the power struggle that led to Menoher moving on to other duties in 1921. Mitchell expected to dominate Patrick in a similar manner. Shortly after the change of command, Mitchell submitted a plan for Air Service

organization that essentially made Patrick a figurehead with Mitchell as the Assistant Chief the de facto commander. Patrick quickly returned the plan marked "disapproved," beginning a brief power struggle that revealed Patrick's steel:

He was told that I proposed to be Chief of the Air Service in fact as well as in name; that I was content to have him continue as my principal assistant; that I would be very glad and willing to consult with him about all Air Service matters, but that he would give no orders, and that while I would consider any recommendations he submitted, final decision in every case would be made by me.<sup>19</sup>

Mitchell was outraged and threatened to resign. Perhaps he thought the War Department would again back him. But Patrick felt confident of support from his superiors and, not one to be easily bluffed, he calmly refused to alter his position, matter-of-factly accepting the resignation. Since it was a Saturday afternoon, General Harbord, the Deputy Chief of Staff, was not in his office and the resignation could not be made official. The following Monday morning Patrick took Mitchell to see Harbord and laid out the situation. When Harbord turned to Mitchell he said he had reconsidered and withdrew his resignation. Patrick then presented Mitchell a written memo outlining Mitchell's duties and responsibilities, which Mitchell then agreed to follow. For the next four years "Mitchell did abide by his undertaking. . . . My own relations with him . . . were satisfactory enough and he performed quite well the duties which from time to time were assigned him."<sup>20</sup>

Patrick applied the same standard of fairness when Mitchell was court martialed in 1925. He directed Ira Eaker, his assistant executive, to provide any Air Service files Mitchell needed for his defense and to cooperate fully with Mitchell's lawyers. Although Patrick and Mitchell often disagreed on the methods of promoting air power, Patrick was always fair and just and both men respected each other.<sup>21</sup>



Even if the men respected him for his fairness, Patrick felt he would never be truly accepted in the Air Service until he became a pilot. One of the airmen's recurring complaints about the Army high command was the lack of air expertise on the staff. Airmen were convinced only qualified pilots could possibly develop a full appreciation of the airplane's possibilities. Patrick moved to remedy his own inexperience. First, he did most of his travel by air in order to learn more about aeronautics, and to show confidence in his pilots and their aircraft. He then took the final step of learning to fly. His instructor, Major Herbert Dargue recalled that: "General Patrick made it clear to me that if he were to qualify for a rating he did not want to slight any part of the regular curriculum through which he required others to pass."<sup>22</sup> The course of study was often interrupted by Patrick's official duties, but on June 27, 1923 the general soloed his plane up over Bolling Field near Washington, performed the required maneuvers, and won the rating of junior airplane pilot. Although he never became very skillful, he had "a feeling of confidence in the ability to handle an airplane, to 'take off,' to land, and to operate it safely in the air."<sup>23</sup> Even with the pilot's rating, Patrick rarely flew without another pilot in his plane, a habit that a few airmen used as a criticism. But in the Air Service overall, the feat of learning to fly, a demanding physical task in the 1920's, at the advanced age of fifty nine, went far in gaining acceptance for the new Chief. Patrick now enjoyed an even closer relationship with his men. He could "talk flying with them, to learn first hand their own ideas about planes and motors, the troubles they experienced . . . the improvements they thought necessary, and their suggestions for the betterment of the Air Service."<sup>24</sup> Dargue expressed the feelings in the Air Service: "Our complete confidence in his leadership and

our morale is strengthened the more by his willingness to undergo the risks of training and the hazard of flying. He is a real chief and highly respected by all."<sup>25</sup>

## Notes

<sup>1</sup>U.S. President's Aircraft Board, *Hearings Before the President's Aircraft Board* (hereafter cited as *Morrow Board Hearings*)(Washington, DC: Government Printing Office, 1925), p. 88. Howard E. Coffin, one of the members of the board, used these words to describe the impression many aviation enthusiasts had at the time of Patrick's appointment in 1921. Most had hoped Billy Mitchell would be appointed.

<sup>2</sup>*Dictionary of American Biography*, Supplement III (New York: Charles Scribner's Sons, 1973), p. 584.

<sup>3</sup> Ltr, MMP to Mr Arthur M. Guild, 17 May 1922, RG 18, E229, B4. Patrick's official correspondence is found in numbered boxes in Record Group (RG) 18, Records of the Army Air Forces, Entry 228, Correspondence of Major General M. M. Patrick, Chief of the Air Service and Air Corps, 1922-1927, Entry 229, Speeches and Articles of Major General M. M. Patrick, 1926-1927, National Archives of the United States (NA), Washington, DC.

<sup>4</sup>*New York Times*, 12 June 1886, p. 5.

<sup>5</sup> *Dictionary of American Biography*, p. 584; *Who Was Who in America*, vol. 1 (Chicago: A.N. Marquis Company, 1943), p. 941; *National Cyclopedia of American Biography*, vol. 44 (New York: James T. White & Company, 1962), p. 266; Flint O. DuPre, *U.S. Air Force Biographical Dictionary* (New York: Franklin Watts, Inc., 1965), p. 187.

<sup>6</sup>*Ibid.*

<sup>7</sup> MMP paraphrasing the talk with Pershing in a letter to his wife, May 11, 1918. In scrapbook of MMP material at the U.S. Army Aviation Museum, Ft Rucker, Alabama.

<sup>8</sup>Mason M. Patrick, *The United States in the Air* (Garden City: Doubleday, Doran, and Company, Inc., 1928), p. 6.

<sup>9</sup>Ltr, MMP to his wife, May 11, 1918.

<sup>10</sup>*Ibid.*, p. 16.

<sup>11</sup>John Frederick Shiner, "The Army Air in Transition: General Benjamin D. Foulois and the Army Air Corps, 1931-1935," vol. I (Ph.D. dissertation, Ohio State University, 1975), p. 18; DeWitt S. Copp, *A Few Great Captains: The Men and Events That Shaped the Development of U.S. Air Power* (Garden City: Doubleday & Company, Inc., 1980), p. 21.

<sup>12</sup>Patrick, *U.S. in the Air*, pp. 16-17; Wesley Frank Craven and James Lea Cate, eds., *The Army Air Forces in World War II*, vol. 1: *Plans and Early Operations* (Chicago: University of Chicago Press, 1948), p. 11.

<sup>13</sup>Patrick, *U.S. in the Air*, p. 70.

<sup>14</sup>*Ibid.*, p. 83.

<sup>15</sup>*Ibid.*, p. 85.

<sup>16</sup>RG 18, Entries 228 and 229, NA.

<sup>17</sup>Ira C. Eaker, "As I Remember Them: Air Chiefs Patrick and Fechet," *Aerospace Historian* 20 (June 1973): 61.

<sup>18</sup>Benjamin D. Foulois and Carroll V. Glines, *From the Wright Brothers to Astronauts: The Memoirs of Major General Benjamin D. Foulois* (New York: McGraw-Hill, 1968), p. 207.

<sup>19</sup>Patrick, *U.S. in the Air*, pp. 86-87.

<sup>20</sup>*Ibid.*, p. 89.

<sup>21</sup>Eaker, "As I Remember Them," 57-59.

<sup>22</sup>Herbert A. Dargue, "Training a Major-General to Fly," *U.S. Air Service* 8 (September 1923): 19.

<sup>23</sup>Patrick, *U.S. in the Air*, pp. 111-112.

<sup>24</sup>*Ibid.*, pp. 112-113.

<sup>25</sup>Dargue, "Training," p. 22.

## CHAPTER III

### THE QUESTION OF AUTONOMY

The Air Service Mason Patrick took over in October, 1921 was an organization in at odds with the Army General Staff and the Navy Department as it searched for a cohesive doctrine that could guide its organization in peacetime and use in war. While the air arm had been a minor novelty for the Army before 1917, its successes during World War I had revealed it as a weapon with immense possibilities to affect the outcomes of future wars. Airmen returned from the war believing the experience showed the airplane would play a distinct role in war and as such deserved a place in the defense establishment equal to land and naval forces. Army and Navy leadership was not so sure that aircraft were uniquely special and were reluctant to give airmen autonomy.

In 1919 and 1920, the battle lines were drawn by during a series of studies conducted by the War Department to determine the best way to organize the air arm.<sup>1</sup> Airmen, led by Billy Mitchell, argued for independence. Mitchell predicted no military operation in the future could succeed without having command of the air and the "air force" that would achieve it should be controlled only by the highest authority. He felt independence from interfering Army and Navy commanders could only be attained through a separate Department of Aeronautics, which would supervise all military, civil, and commercial aviation.<sup>2</sup>

The position of the Army establishment was that during the war the airplane had failed to show that "aerial activities can be carried on independently of ground troops to such an extent as to materially affect the conduct of the war as a whole."<sup>3</sup> The Secretary

of War and senior commanders felt that as long as this fact remained the same, an independent air arm would violate the principle of unity of command. In wars where ground forces would ultimately decide the outcome, "the authority must be vested in the commander of the ground forces, and aviation must continue to be one of the auxiliaries of the principal arm, the Infantry."<sup>4</sup>

Failing to convince the military's senior leadership—who persuaded Congress to establish the Air Service as a subordinate branch of the Army in the National Defense Act of 1920—Mitchell took the fight public. The famous battleship bombing tests in June/July 1921 showed the vulnerability of naval forces, but Mitchell's failed to change the minds of the establishment. Seeing that the report of the joint Army-Navy Board that conducted the bombing tests would not call for major changes, Mitchell he leaked his own report, claiming his bombers could have crippled the entire Atlantic Fleet. He called for a Department of National Defense in which the air arm would be on equal footing with the Army and Navy. Mitchell implied that only when this occurred could the government insure correct decisions on defense needs, with all voices having equal import.<sup>5</sup> Mitchell's unauthorized action succeeded in bringing the already tense relations between the Air Service and the General Staff and Navy high command to a boil and led to the removal of General Menoher and appointment of Mason Patrick as Chief of the Air Service.<sup>6</sup> It also reinforced the image of the Air Service as a group of undisciplined prima donnas without respect for the chain of command. The task of bringing order to the confusion demanded a highly talented man and the next six years extended Mason Patrick to the limits of his capabilities.

Acknowledging the requirement for military discipline and the realities of the political environment, Patrick slowly and carefully conducted a campaign to convince the Army of the importance of air power. Although personally convinced the Air Service should become a separate service, he recognized the goal would be achieved through evolution, not revolution. The intervening years, however, were ones of struggle against pressure from aeronautical zealots on one hand to move faster and doctrinal conservatives on the other to retain the status quo.

### **Air Power Doctrine**

When Patrick assumed command of the Air Service, there was no official air power doctrine. One of his first acts was to reorganize his staff and charge the new Training and War Plans Division to produce a new regulation on aviation doctrine. Working from manuscript produced earlier in the year at the Air Service Field Officer's School by Major William C. Sherman, the office produced what became *Training Regulation 440-15*. The manuscript accepted the prevailing Army belief that the infantry was the decisive branch in land war and all other branches were to be used to insure the success of the ground units. Sherman, however, made a distinction between "air service" units, used directly with ground forces, and "air force" units, which conducted missions not necessarily linked to infantry operations. He felt the first duty of the Air Service was to "gain and hold control of the air, by seeking out and destroying the hostile air force, wherever it may be found." Pursuit aviation would attack "important enemy forces on the surface of the land or sea." During 1922, Sherman's writings were consolidated into

manual form and issued as *Training Regulation 440-15, Fundamental Conceptions of the Air Service*, in early 1923.<sup>7</sup>

Patrick adopted the distinction between "air service" and "air force" as the core of his campaign to incrementally change Army thinking. They did not satisfy the outspoken men who wanted autonomy now, but they offered Patrick a reasonable opening for showing the unique capabilities of air power. In his first annual report to the Secretary of the Army for fiscal year 1922, Patrick stated the "air service" units would consist of the Army's "observation units, the functions of which are to carry on visual and photographic reconnaissance, to locate enemy targets, to adjust artillery fire and to carry on contact patrol and other liaison with the Infantry." "Air force" units would consist of "pursuit, bombardment and attack aviation and be purely offensive in each of these arms." Pursuit aviation was charged with destroying enemy aircraft, protecting friendly observation, bombing, and attack planes, and assisting in attacks on enemy ground forces. Bombardment planes were assigned to destroy military targets "both in the theater of operations and in the enemy's zone of interior." Attack units would harass enemy ground forces through strafing and low level bombing. Patrick's report went on to advocate a mix of 20 percent air service and 80 percent air force units showing his recognition of the offensive capabilities of the air plane.<sup>8</sup>

Patrick's views in his annual report were natural conclusions drawn from serious considerations of the methods of warfare. He maintained that while "the principles underlying the use of military weapons do not change," the introduction of new weapons changed the way in which the principles were applied.<sup>9</sup> The airplane was the newest change in weaponry and needed careful examination to determine its place in warfare.

World War I saw the airplane used in various ways, but the dominant role was fighting enemy aircraft to clear the sky to allow friendly reconnaissance aircraft to complete their tasks. The offensive uses of aviation proved to be the most effective and aggressive tactics exploiting the airplane's attack capability overshadowed passive patrolling or close protection of formations of unarmed planes.<sup>10</sup> Consequently, the offensive units of the air arm should be organized together in order to maximize their potential.

Patrick's 1922 annual report prompted Secretary Weeks to order Patrick to do a comprehensive study of how the Air Service should be incorporated in Army mobilization plans and what was the correct peacetime organization necessary to carry the plans out.<sup>11</sup> Patrick agreed the study should be done, but felt it would be wasted effort since the Air Service had fundamental problems with the size of the Air Service called for in the existing mobilization plans. Instead, he submitted an entirely separate review of what he felt was the necessary wartime strength for the Air Service.<sup>12</sup> The plan called for consolidating all offensive air units into a "well-balanced Air Force" serving in the "GHQ Reserve." Observation aircraft were the only ones to be directly assigned to ground commanders, but even these would be removed from the division level and concentrated at the Corps. Patrick believed economy dictated planes be assigned where they would perform the most important missions most effectively. Offensive use of aircraft would take priority. He maintained "Very often there is as distinct and definite a mission for the Air Force independent of the ground troops as there is for the Army and Navy independent of each other. Bombardment aviation especially will act with ground troops only in very rare instances."<sup>13</sup>



Patrick's sweeping recommendations prompted the War Department to convene a board of officers, headed by Major General William Lassiter, the Deputy Chief of Staff for Plans and Operations (G-3), to consider the issue. In his testimony, Patrick restated the air arm had two distinct missions in wartime. "Aerial tactics and the strategy of aerial warfare, particularly in its offensive phase, are now recognized as being as important as the tactics of the ground and sea forces." He emphasized the primacy of the offensive in aerial tactics and the dominance of pursuit aviation. Because the most important air mission was to gain air supremacy, Patrick concluded that "The principle of concentration of Air Force has become a maxim. The present assignment of Air Force units to armies dissipates this force so as to render it far less effective." In a plan worked up by his staff, he recommended the number of pursuit groups be increased from 14 to 24; bombardment from 1 to 6; attack reduced from 7 to 6; and observation reduced from 118 squadrons to 100. He also insisted that his recommendation, that observation units be removed from individual divisions and concentrated at the 10 corps level, be adopted as well.<sup>14</sup>

Patrick's plan, however, ran into opposition from Brigadier General Hugh A. Drum, a board member from the General Staff. He insisted the board follow the principles used by the War Plans Division of the General Staff to determine wartime organization and that "All aviation in an Army should be employed for participation in the battle," and only strategical bombardment and reconnaissance should be placed in the GHQ Reserve.<sup>15</sup> This principle in effect denied air power had any function other than directly aiding ground forces. Under these rules, aircraft were first allocated to meet the needs of ground units and whatever squadrons remained could then be put into the G. H. Q. Reserve.<sup>16</sup>

The Lassiter Board bowed to the War Plans Division rules in refusing to remove observation units from divisions, but its report was a breakthrough for Patrick because it explicitly recognized that some air missions had little connection with ground operations. Going further along the path Patrick had proposed, the report laid out a new tactical dispersion of air units:

- (a) Observation Air Service should be an integral part of divisions, corps, and armies, with a reserve under General Headquarters.
- (b) An Air Force of attack and pursuit aviation should be an integral part of each Field Army, with a reserve under General Headquarters.
- (c) An Air Force of bombardment and pursuit aviation and airships should be directly under General Headquarters for assignment to special and strategical missions, the accomplishment of which may be either in connection with the operation of ground troops or entirely independent of them. This force should be organized into large units, insuring great mobility and independence of action.<sup>17</sup>

The conclusions of the Lassiter Board were immediately reflected in the new Field Service Regulations for the Army published later in 1923. The changes were subtle, but important for airmen. Although the infantry mission was still the proper focus of all the branches, they conceded however, that "no one arm wins battles."<sup>18</sup> For air power, they recognized that air supremacy over the battlefield allowed all other elements of the army to operate without interruption. Therefore, pursuit aviation was considered "the most vital element of the air service."<sup>19</sup> Patrick was frustrated, however, that the manuals still did not use the terms "Air Force" and "Air Service" nor make the distinction between the two.

Patrick pressed on with the struggle using all available means to get his message out. He realized that while no one doubted that the airplane was now an important part of the armed forces, it was an up-hill battle to "shake the conservatism" of senior ground

commanders, "particularly those who did not have the opportunity to see for themselves during the World War just what aircraft could do."<sup>20</sup> The arguments, however, had to be logically presented without "any exaggerated claims, any overstatements."<sup>21</sup>

One channel open to Patrick was the many periodicals aimed at armed forces personnel. In October 1923 he used the *Army and Navy Journal*, to temper claims of outspoken air enthusiasts that the September 1923 bombing tests against the *USS Virginia* and *USS New Jersey* had once again proved the Navy obsolete. Responding to the sharp rebuttals made by naval and army officers which indicated their bitter feelings toward airmen, Patrick showed his clear understanding of both sides of the issue in his article on October 6. "The Air Service does not for a moment assume to say that the battleship or any other component of the naval establishment is obsolete," but he followed to emphasize the need for a strong air arm.<sup>22</sup>

In an article in *The Military Engineer* Patrick delineated the differences between Air Force and Air Service units and went on to visualize the role of aircraft in time of national emergency. Air Force units, he said, "should be in readiness to strike the day when war is declared." If they were ready and in sufficient strength to achieve air supremacy, ensuing attacks on the enemy ground forces "would effectively hamper his mobilization." It was "at least conceivable that he would be unable to assemble his forces" or to offer "effective resistance to our own army, whose concentration he has been powerless to prevent." Patrick went on to postulate a decisive role by quoting General Duval, the Chief of the French Air Service during the World War. Duval believed that a highly developed air force might even ignore the enemy's army and "by a campaign of

terror carried on against the enemy population far behind the lines, it may have so great effect as to bring the enemy to terms.”<sup>23</sup>

Air power doctrine lectures at the War College and Staff College were another opportunity to influence the rising leaders of the Army. His March 1924 speech at the General Service Schools at Fort Leavenworth epitomized Patrick's conservative approach to accommodate concerns of traditional thinkers but still promoted the increasing impact airmen saw for air power. Up front, he discounted any idea that “the Air Service intended in the future to fight all wars by itself and that in its opinion the remaining branches of the Service could safely stay at home.” The Air Service’s definition of operations “independent” of the ground forces was those missions “far removed from the theater of operations.” He was careful to follow that independent missions, however, would be “undertaken absolutely in accord with the general plan of operations of GHQ and were primarily intended to assist all other component parts of the armed forces in carrying out the common mission—victory over the enemy.”<sup>24</sup>

Having defused the conservatives, Patrick then turned to the vision of air power as a critical influence on the outcome of future wars. He criticized officers who persisted in thinking of aviation as an auxiliary and limiting its use to the immediate battlefield. Comparing the argument to restricting the range of artillery to that of rifles carried by infantrymen, he said that since “air units can operate and strike far beyond the immediate front line of an army, it is plainly evident that such distant blows effectively delivered may affect vitally the operations of the other arms, and surely no man would be justified in refusing to utilize such an agency for such a purpose.” Again advancing the theory of deep attack to the fullest extent, this time Patrick quoted Marshal Ferdinand Foch who

believed large scale bombing of cities would crush the morale of a population to the point where they would disarm the Government. To Patrick the possibility of Foch's predictions being true certainly justified a strong air arm. It did not, however, mean that any other branch of the armed forces would be neglected; only that if "one side or the other does obtain such a measure of air supremacy as to enable it to deliver powerful blows at selected places, this may be a deciding factor and partially responsible for the speedy and victorious conclusion of the conflict."<sup>25</sup>

Getting consensus on doctrine was not the only tact Patrick took to promote the argument for autonomy. He firmly believed the Air Service needed a concrete mission to prove its worth to the American public. The bombing tests of 1921 had demonstrated the capability of aircraft to attack and sink naval vessels and Patrick moved to exploit the results in the one area that consistently captured the public's attention: coastal defense of the United States. He intended to cut out a piece of the mission for the Air Service.

The airplane presented new problems for military planners because it could operate over both land and water. The line between Army and Navy operations was no longer definite and air power was equally applicable to land and naval warfare. Since the effective range of Air Service bombers was approximately 200 miles, Patrick contended that the Air Service should be given responsibility for the 200 mile strip along the coasts of the country.

### **A Separate Mission**

Patrick faced a considerable challenge in that the Navy already had large numbers of land-based scout planes assigned to patrol the area Patrick now wanted exclusively for

the Air Service. Various joint Army-Navy boards that met from 1917 to 1920 to tackle the division of effort failed to reach any concrete solution and the documents they published were vague and easily circumvented. Each service interpreted the joint regulations to fit their own needs.<sup>26</sup>

From 1921 to 1924 Patrick time and again pushed for a definite policy for coast defense. He contended that Army aviation should control all land-based planes and Navy aviation should be restricted to aircraft flown from ships of the fleet.<sup>27</sup> The Navy, on the other hand, contended that it was obeying the principles laid out in earlier attempts to specify functions. General Order No. 4 issued by the War Department in 1920 allowed naval aviation to operate from ships at sea or land bases when functioning as an arm of the fleet, doing overseas scouting, attacking shore establishments in cooperation with naval forces, flying reconnaissance and patrol of coastal sea areas, or assisting convoy operations.<sup>28</sup> Patrick had little to stand on except for claims of duplication of effort, the General Staff did not press the Navy for a solution to the problem, and few people thought the threat of air attack from across the seas credible enough to warrant serious consideration.

### **The Autonomy Solution**

By the end of 1924, Patrick faced the hard fact that the War Department, Congress, and the President seemingly were unwilling to take constructive steps to remedy the condition of the Air Service that had continued to deteriorate under budgetary pressures. He needed some way to gain more control over the Air Service's ability to influence its own growth and development. The organizational system then in operation,

of working through the General Staff, hindered freedom of action. Patrick regarded the Air Service's problems as unique when considered in relation to those of the Army in general. The necessity of having an air force in being at the beginning of hostilities prohibited a mobilization period and made it imperative that the small air forces available in 1924 be built up to effective strength. The special conditions of service under which the Air Service operated made the demands on the personnel, supply, and budgeting systems different from those of the ground forces.<sup>29</sup> The more Patrick thought about these problems, the more he became convinced that a change in the Air Service's position within the defense structure was necessary.

In November 1924, Patrick began to outline what he considered to be the solution to "the air defense problem of the United States." Based on the suggestion from a friend, Patrick's plan consolidated all his experience of the last three years. In testimony before the Navy's General Board he stated that the ultimate solution would be consolidation of all military aviation and aircraft development into a single agency.<sup>30</sup> The move toward a unified air service, however, was a drastic one, and Patrick knew that it had little chance of implementation. Army and Navy commanders still did not see the Air Services as being so important to warrant separation and all Congressional action on the matter since the passage of the National Defense Act in 1920 had quietly died in committee.<sup>31</sup> Instead of pushing for the leap to a unified service, Patrick decided to proceed a step at a time. On December 19, 1924, in a memorandum to the Adjutant General, Patrick outlined an interim proposal. "I am convinced that the ultimate solution of the air defense problem of this country is a united air force. Until the time comes when such a radical reorganization can be effected certain preliminary steps may well be taken." His plan was to make the

Air Service into a separate Air Corps with status much like that enjoyed by the Marine Corps within the Navy. Only with such autonomy could the Air Service "develop and assume its proper place in national defense." Sounding much like his assistant, Billy Mitchell, Patrick justified his suggestions on the grounds of the airplane's role in future wars. "Future emergencies will require at the very onset, before the ground armies can get under way, and in many cases before the Navy can make its power effective, the maximum use of air power on strategic missions." His next words showed just how much Patrick had become imbued with the potential of air power:

We should gather our air forces together under one air commander and strike at the strategic points of our enemy—cripple him even before the ground forces can come in contact. Air power is coordinated with land and sea power and the air commander should sit in councils of war on an equal footing with the commanders of the land and sea forces.<sup>32</sup>

Patrick's memorandum made several specific recommendations as to what the plan and the Air Service required. First, he called for implementation of the Lassiter Board's programs in order to bring aircraft and personnel levels up to required strength. Second, he requested legislation creating an Air Corps apart from the War Department. Included in this second piece of legislation were several provisions. First, designation of an air commander in war plans to control air forces at least in the beginning stages of a war, and second, definite delineation of the duties of the Army and Navy in coast defense. Patrick called for recognition that all land based operations be conducted by the Army. Third, that the Chief of the Air Corps be responsible for all training of air units and that the doctrine of offensive action be dominant. Fourth, that the Air Corps have control of its personnel system, including procurement, assignment, promotion, elimination, and retirement. Fifth, that the Air Corps be allowed a suitable uniform. Sixth, that the Air



Corps be given control of its appropriations and be required to submit only one request for all costs of Army aviation. And finally, seventh, that the Air Corps be responsible for procurement, storage and issue of equipment peculiar to the air arm and that it be given control over the policies determining its distribution and usage. The autonomy solution, then, was as much a bid for control of the administration and development of the Air Service in peacetime, as for command of the air forces in war.<sup>33</sup>

The General Staff reaction to Patrick's suggestion was a paragraph by paragraph rejection of the autonomy concept. It was a classic summary of the traditional Army views of aviation and showed the arrogance ground officers displayed toward airmen. The War Plans Division, under the guidance of Brigadier General LeRoy Eltinge, made the study of Patrick's proposal without distinguishing between autonomy and total separation. They concluded that since Patrick admitted that autonomy was the first step toward unification, then approval of the autonomy proposal would be in fact acquiescence to a unified air force. The critique attacked Patrick's view that air forces were now coordinate with land and sea forces. "Nothing is of major importance in war, except as it influences events on land." The final decision would always depend "upon the struggle between multitudes of human beings fighting on land." Since air forces could "do nothing but attack and destroy; they cannot occupy and hold," it followed that "air forces are not coordinate with either military or naval forces, but constitute an auxiliary arm."<sup>34</sup>

The report also concentrated on the problems an autonomous air arm would cause. It argued that separation would violate the principle of unity of command and complicate wartime organization because of the "absence of a common superior." In addition, the ground forces would be crippled by the loss of their air force units and would be unable to

continue fighting if the separate air force was defeated. (The staffers assumed that air units under ground force command would be more successful.) The argument for a separate budget was countered by the specious argument that if one branch was allowed a separate budget, then other branches would want the same and the entire Army budgeting system would disintegrate into component parts fighting for their own funds. A separate supply system would only mean duplication of effort between the Air Service and the Quartermaster Corps.<sup>35</sup>

In the end, the War Plans Division toed the standard Army line in regards to aviation. Air power was not equal to land or sea power and could never be decisive in war. It was an important auxiliary to the ground forces, but the infantry would force the final decision. The Air Service played an integral role in ground operations and therefore could not be removed from the Army without crippling it. The principle of unity of command was vital to the national defense and command of ground and air forces rested in the hands of the senior Army commander. The report recommended that these principles be published as official War Department policy and that Patrick be sent a letter informing him of the disapproval of his proposal. The War Plans Division sidestepped implementation of the Lassiter Board programs by deferring any action before the Joint Board made its decision.<sup>36</sup>

The final War Plans Division report was forwarded to Brigadier General Hugh Drum, Assistant Chief of Staff, G-3, for his comments and suggestions. His comments reflected the extent of the bad blood that existed between the General Staff and the Air Service. Drum was the hard-liner on the Staff on the subject of the Air Service, and although most of his ire was directed at and prompted by Patrick's assistant, Billy

Mitchell, his attack on Patrick's proposal verged on effrontery. Drum, who was junior in rank and age to Patrick, believed that Patrick's proposal was an attack on the way the Air Service was being handled by the War Department. He demanded that Patrick be "called upon to show grounds" for his statements and if they were rejected to withdraw them. Patrick never intended to attack the General Staff, but was only searching for relief of the Air Service's problems. In any event, Drum's demand was overruled, and Patrick never saw the memo from General Drum.<sup>37</sup> Patrick also never received any request for further information about the autonomy question, a fact which would cause embarrassment for Army in the near future.

Patrick's original proposal to the Adjutant General was not very detailed as to how an autonomous air arm would function, who would have authority over it, or how it would interact with the Army. But two weeks after sending the original letter and during the time the General Staff was enunciating its objections, he was able to clarify his ideas before a special House committee investigating the Air Service. Informally known as the Lampert Committee, but officially titled Select Committee of Inquiry into Operations of the United States Air Services, began public hearings in October 1924. By the time the hearings were over in March, 1925, the committee heard more than 150 witnesses and compiled six volumes of recorded testimony.<sup>38</sup> Patrick first testified on December 13, but his suggestions for reorganization were not discussed until he reappeared on January 5. Patrick outlined his reasoning for a change in Air Service organization and reemphasized the need for a strong air arm. He repeated the call for two sets of legislation. First, the need to implement the Lassiter program to beef up the Air Service in personnel and equipment, and second, to create an Air Corps with autonomy within the War

Department. Specifically, the new corps would remain under the Secretary of War, but would not fall under the General Staff. The corps would continue to use the services of existing Army agencies which already aided Air Service operations in order to minimize duplication. The new agency would have "as its primary and exclusive function, the development and utilization of air power as an air arm for national defense." It would be able to speed "the solution of the personnel, supply, and morale problems which are peculiar to it." And in an appeal to the administration's quest for fiscal austerity, Patrick pointed out that a separate budget would eliminate much of the confusion over Air Service financing. In addition, he felt that consolidation under the Air Corps of "all air coast defense functions which can be performed from land bases" would be "one of the most important and immediate economies, and one of the greatest gains to efficient national defense."<sup>39</sup>

Although Patrick's proposal was the newest idea in the continuing battle for a separate air arm, the Lampert hearings were dominated by the testimony of Billy Mitchell. From 1921 to late 1924, Patrick had kept Mitchell under some semblance of control by sending him away from Washington on extensive fact-finding tours of Europe and the Pacific and assigning him to internal matters. Beginning in December 1924, however, Mitchell was back in the capital and began a highly publicized campaign that became more and more virulent. He once again attacked the Navy, claiming it was obsolete, but he also began to attack his superiors in the Army General Staff, accusing them of hampering development of the Air Service. Mitchell's testimony before the Lampert Committee was particularly inflammatory when he charged that the United States only had "nineteen airplanes fit for war" and that the Army and Navy might be falsifying evidence in order to

confuse Congress. He also charged airmen testifying before Congressional committees were being stifled by the fear of reprisals by their superiors.<sup>40</sup>

Mitchell's testimony enraged Secretary of War John Weeks, and he swiftly moved to refute the charges. He exposed many discrepancies that Mitchell was hard pressed to explain, thus discrediting him. Weeks also wrote a letter to the Lampert Committee explaining that War Department policy allowed military personnel to testify without harassment as long as they pointed out that their words were their own opinions and as long as their facts were accurate.<sup>41</sup> Patrick felt Mitchell's statements were a set back to the Air Service. He reflected his own conservatism when he wrote a friend: "We need a calm consideration of these question. . . . This, however, is not hastened by recrimination nor by sensational statements, which, when analyzed, are sometimes without foundation."<sup>42</sup> The end result was that when Mitchell's term as Assistant Chief expired in March 1925, he was not reappointed. He was demoted to colonel and reassigned to San Antonio, Texas where he became the aviation officer for the Eighth Corps Area.<sup>43</sup>

Mitchell's "exile" did not temper his opinions nor the distance from Washington keep him out of the headlines. On September 5, 1925, two days after the Navy dirigible *Shenandoah* crashed with heavy loss of life, Mitchell published a scathing indictment of the Navy and War Departments. He charged the condition of aeronautics in the United States was due to the "incompetency, criminal negligence, and almost treasonable administration of the National Defense by the Navy and War Departments."<sup>44</sup> The attack spurred an uproar in the military high commands and the Executive branch. President Coolidge, who never had a high opinion of Mitchell's methods, ordered Mitchell court martialed. In addition, at the request of the two service secretaries, the President formed a

special committee to make a comprehensive and definitive study of the military aviation issue. Chaired by prominent businessman and close Coolidge friend Dwight Morrow, the secretaries hoped the board would take some sting out of the harsh punishment Mitchell was expected to receive and offer a second opinion to the Lampert Committee report which, although not yet released, was rumored to favor independence for the air arm.<sup>45</sup>

The Morrow Board consisted of nine highly respected men from a variety of fields including Congress, the military, and the aviation industry. Public hearings on September 21 and continued for four weeks. Patrick appeared twice before the board and gave a sweeping review of the issues and problems he had been trying to solve for four years. He described his tenure as "a process of education" about air power. When he first became associated with the Air Service in World War I he "knew nothing of its importance" and when the issue of independence was discussed in 1920 he was opposed to it.<sup>46</sup> In the intervening years, however, Patrick's ideas changed. He was now convinced that "the only real defense against an air attack is aircraft of our own."<sup>47</sup> He maintained that "the Air Service must constitute our land-based air power" and that when performing certain missions it had a function which was "separate and distinct from the function it performs in support of land power."<sup>48</sup> In the fight to get the General Staff to recognize this fact he felt that while they listened to the airmen, the Air Service was still regarded "rather as a stepchild than as a real member of the family, and in some cases its motives have been questioned and its recommendations have either been ignored or denied."<sup>49</sup> In addition to the fundamental question of doctrine, Patrick also detailed the personnel and equipment problems the Air Service was burdened with.

To solve these problems, Patrick again outlined his proposal for autonomy within the War Department. He stated while he felt the ultimate solution was a department of national defense with the air arm equal to the Army and Navy, the time was not right for "so radical a departure." Formation of an Air Corps out from under the General Staff would be an intermediate step. Not only would the new organization recognize the distinctions between air service and air force, but a separate budget and promotion list would enable Patrick to remedy some of the critical institutional problems. Patrick recommended funding be increased to implement the 1923 Lassiter Board's construction and personnel programs.<sup>50</sup>

Patrick's testimony finally prompted the General Staff to request details of the autonomy proposal Patrick had first submitted nine months before. On September 26 the Adjutant General ordered Patrick to submit a detailed study of the proposal including all contemplated changes in the Office of the Secretary of War, details of the relationships between the Air Service and the other branches of the Army, and precise accounting of the new budget and personnel requirements. To Patrick's dismay, he was ordered to submit the study in five days although he had not pursued in-depth analysis of his plan after getting no response to the original proposal letter of the previous December.<sup>51</sup> Patrick's response on October 1 was brief in detail because of the lack of time. He argued that such a study required action from all the other branches that already had connections with the Air Service because they had the details as to the budget requests and other organizational items. Such actions were impossible to accomplish in five days. The most important items Patrick did clarify were that coordination between the new Air Corps and the Army would be accomplished through the Assistant Secretary of War and that the services

rendered by other branches would continue but would be paid for from the separate Air Corps budget. In addition, Patrick made it clear that squadrons assigned to Army units would be under the command of the ground commanders. Only the air force units retained by the Air Corps would function independently. Patrick was adamant that "the time allowed this reply has been entirely too short" and pointed out that he had received no feedback in the nine months following his original proposal.<sup>52</sup>

In its testimony to the Morrow Board, the Army, represented by Brigadier General Drum, attacked Patrick's and Mitchell's. Using basically the same arguments written by the War Plans Division staff in response to Patrick's December 1924 proposal, Drum stated that "the idea that the present of future development of aviation will create a third element in national defense known as air power coordinated with land and sea power is fundamentally unsound." Since unity of command would be violated if air forces were separated from ground commanders, there was no justification on any grounds for any form of an independent air arm.<sup>53</sup>

December 1925 was the month of decision for the two investigations of the Air Service. The Morrow Board and Lampert Committee issued their reports within two weeks of each other and although they examined basically the same material, their conclusions were diametrically opposed to each other.

The Morrow Board, issued on November 30, endorsed the status quo, rejecting the need for a separate air arm. The United States faced no serious threat of invasion and the state of the art of aircraft prohibited any attack from across the oceans. Without a credible threat the Air Service's main argument was considerably weakened. Although it dashed the hopes for independence or autonomy, the board did make recommendations



aimed at correcting the problems pointed out by Patrick. Its recommendations included: the Air Service be renamed the Air Corps; an additional Assistant Secretary of War be named to supervise aviation; an air section be placed in each of the five divisions of the General Staff in order to increase aviation representation; two additional brigadier generals be appointed to the Air Service; officers in certain command positions be given temporary rank commensurate to the responsibility; flight pay be made a permanent feature of Air Service pay; that appropriations should be increased in order to add more flying cadets and Reserve officers; that the number of ROTC units be increased; that the possibility of having enlisted pilots be examined; and that a five year procurement program be funded by Congress.<sup>54</sup> The board's conclusions were terrible disappointments to airmen and the proposed remedies were recognized as being superficial at best.

The Lampert Committee report followed the Morrow Board report by two weeks and by the time it was made public its conclusions were already discounted by Congress and the public. The report sided with Patrick and Mitchell calling for an independent air arm within a department of national defense. In addition, most of Patrick's recommendations were adopted. The report called for a separate budget, a minimum yearly expenditure of \$10,000,000 for aircraft procurement, a five year expansion program, and increased representation on the General Staff. Congress was charged with alleviating "the inequalities and injustices suffered by the aviation officers" and with providing legislation which would conclusively define the fields of operation between the Army and Navy with respect to aviation.<sup>55</sup> The report embodied all the hopes and dreams of the Air Service going even further than what Patrick thought possible at the time.

By the end of December 1925, Patrick had identified the major problems and needs of the Air Service and helped create a sense of urgency which permeated Congress and the public for some sort of action. Congressional action in 1926 would determine how successful Patrick was in advancing his position.

## Notes

<sup>1</sup>Dickman Board, Crowell Board, Menoher Board

<sup>2</sup>Hurley, *Billy Mitchell*, pp. 42-45.

<sup>3</sup>"Report of Superior Board on Organization and Tactics," April 19, 1919 in U.S. Congress, House, Committee on Military Affairs, *Hearings on Department of Defense and Unification of Air Service* (Hereafter referred to as *1926 Hearings*, p. 953.

<sup>4</sup>"Report of Superior Board on Organization and Tactics," April 19, 1919 in U.S. Congress, House, Committee on Military Affairs, *Hearings on Department of Defense and Unification of Air Service* (Hereafter referred to as *1926 Hearings*, p. 953.

<sup>5</sup>Hurley, Billy Mitchell, pp. 62-68.

<sup>6</sup>*Ibid.*, p. 69. There are a variety of reasons offered why Secretary of War Weeks supported Mitchell, the subordinate, over his superior officer, Gen Menoher. 1)Menoher was unable to discipline or control Mitchell, 2)Weeks was afraid to tangle with Mitchell, who was at the peak of national popularity, 3)Weeks was greatly impressed by Mitchell's success in the bombing tests. In announcing the change, Weeks simply said Menoher requested the move for personal reasons. This discussion in James P. Tate, "The Army and Its Air Corps: A Study of the Evolution of Army Policy Towards Aviation, 1919-1941" (Ph.D. dissertation, Indiana University, 1976), p. 26.

<sup>7</sup>Major William C. Sherman, "Air Tactics, 1921" quoted in Robert Frank Futrell, *Ideas. Concepts, Doctrine: A History of Basic Thinking in the United States Air Force* (Maxwell Air Force Base, Alabama, 1971), p. 40. See also, *USAF Historical Studies: No. 89: The Development of Air Doctrine in the Army Air Arm. 1917-1941* (USAF Historical Division, Research Studies Institute, Air University, 1955), p. 16.

<sup>8</sup>U.S. War Department, "Annual Report of the Chief of Air Service, 1922," (microfilm), USAF Academy Library (hereafter cited as USAFA), p. 8.

<sup>9</sup>Mason Patrick, "The Use of Aircraft in War," *American Unity Forward*, October 1922 in Box 1, Entry 228/229, RG 18, NA.

<sup>10</sup>"Air Force Tactics," speech at the Army War College, November 1923, p. 5, Box 1, Entry 228/229, RG 18, NA; "The 'Air Experience' Course," article for *The Military Engineer*, October 28, 1925, Box 1, Entry 228/229, RG 18, NA.

<sup>11</sup>Letter, Adjutant General (AG) to the Chief of Air Service (COAS), December 18, 1922, War Plans Division file (WPD) 888-1, RG 165, NA.

<sup>12</sup>1st Ind., COAS to AG, January 19, 1923, WPD 888-1, RG 165, NA. The mobilization plans then in effect called for six Field Armies. The plan included only one bombardment group and insufficient numbers of pursuit squadrons. Observation

squadrons were attached to division, corps, and army headquarters, with some remaining in the GHQ Reserve. Attack planes were located with army headquarters and GHQ Bombardment units were the only squadrons assigned solely to GHQ Reserve.

<sup>13</sup>3rd Ind., COAS to AG, February 7, 1923, WPD 888-1, RG 165, NA.

<sup>14</sup>"General Statement of Major General Mason M. Patrick, Chief of Air Service, to the War Department Committee appointed by the Secretary of War March 17, 1923, concerning inadequacy of the present war organization of the Air Force and the ineffective status of the present small peace organization with remarks pertaining to the decline of the aircraft industry," (Hereafter referred to as Testimony to Lassiter Board), WPD 888-1, RG 165, NA.

<sup>15</sup>Excerpt from "Report of the Special Committee Appointed by the Director, War Plans Division, to Define the general Plan of Organization to be Adopted for the Army of the United States, Provided by the Act of June 4, 1920," quoted in "Report of a Committee of Officers Appointed by the Secretary of War, March 17, 1923, (Hereafter referred to as Lassiter Board Report), p. 1, WPD 888-1, RG 165, NA.

<sup>16</sup>Futrell, *Ideas, Concepts, Doctrine*, p. 42.

<sup>17</sup>Lassiter Board Report, p. 4.

<sup>18</sup>U.S. War Department, *Field Service Regulations. United States Army, 1925* (Washington, DC: Government Printing Office, 1924), p. 11, quoted in Futrell, *Ideas, Concepts, Doctrine*, p. 42-45.

<sup>19</sup>*Ibid.*, pp. 21-24, quoted in Futrell, *Ideas, Concepts, Doctrine*, p. 43.

<sup>20</sup>Letter, Patrick to General P.R.C. Groves, April 3, 1924 Box 4, Entry 228/229, RG 18, NA.

<sup>21</sup>Letter, Patrick to Lt. Col. R.C. Kirtland, December 4, 1923, Box 5, Entry 228/229, RG 18, NA.

<sup>22</sup>*Army and Navy Journal*, LXI, all issues of September and October, 1923.

<sup>23</sup>"Article published in *Military Engineer*," Box 2, Entry 228/229, RG 18, NA. The article was published under the title "The Air Service and the Corps of Engineers," *Military Engineer*, XV, No. 81, 1923.

<sup>24</sup>"Fort Leavenworth Lecture," delivered March 27, 1924, Box 1, Entry 228/229, RG 18, NA.

<sup>25</sup>*Ibid.*

<sup>26</sup>*USAF Historical Studies: No. 89*, pp. 35. Shiner, "The Air Arm in Transition," p. 81.

<sup>27</sup>*USAF Historical Studies: No. 89*, pp. 34, 36; *Army and Navy Journal*, LXI, April 5, 1924, p. 761.

<sup>28</sup>"Air Force Tactics," pp. 1-2; *Army and Navy Journal*, LXI, 19 April, 1924, p. 816.

<sup>29</sup>*Lampert Hearings*, pp. 522-523; *Morrow Board Hearings*, p. 1213. Patrick believed that the General Staff was taking over too much in the day-to-day operations of the Army, instead of confining itself to policy making. He cited the example of having to send his training schedules to the General Staff. At the time, there was only one or two air officers on the staff and Patrick felt that they were interfering in matters they knew nothing about.

<sup>30</sup>Letter, Patrick to Admiral Edward Eberle, November 11, 1924, File No. 321.9, Entry 166, RG 18, NA.

<sup>31</sup>Legislative action on the question of independence was almost nil during the first half of the 1920's. Representatives Charles Curry of California and John Morin of Pennsylvania submitted bills for a Department of Aeronautics which would handle both civil and military aviation, but neither received serious consideration. The Curry bill was reintroduced in December 1924 and eventually met the same fate. The hearings, however, were much more lively because of the testimony of Billy Mitchell. McClendon, *The Question of Autonomy*, pp. 101-112; Terry Drucker(?), *Digest of Legislative Proposals for a Department of Aviation and/or Department of National Defense, 1916-1943* (1944), pp. 4-5.

<sup>32</sup>Memo, COAS to AG, December 19, 1924, WPD 888-22, RG 165, NA.

<sup>33</sup>*Ibid.* Several of the provisions were direct slaps at current Army policies. The airmen had been pushing for a flat lapel type uniform instead of the high collar one which made flying quite difficult. The budget system was very confused making it extremely difficult to estimate how much money was actually being spent on Air Service operations. The Air Service was responsible for its own supply of aircraft and special equipment, but the Quartermaster Corps had responsibility to supply material common to the Army in general. Other branches of the Army, such as the Corps of Engineers, Ordnance Department, and Signal Corps, also performed services for the Air Service. Appropriations for these services were included in each branch's budget. Patrick wanted a single Air Service appropriation which would include all these moneys in order to keep track of actual costs. The various branches would continue to perform their services for the Air Service, but would be reimbursed from the Air Service's appropriation.

<sup>34</sup>"Notes on Reorganization of the Air Forces for National Defense," from Brig. Gen. Eltinge, Assistant Chief of Staff, WPD to the WPD staff, December 24, 1924, WPD 888-22, RG 165, NA; Memo, Eltinge to the Chief of Staff, January 6, 1925, WPD 888-22, RG 165, NA. Although Eltinge's notes to his staff were supposedly "informative but not directive," almost every argument was quoted in the staff's report.

<sup>35</sup>*Ibid.*

<sup>36</sup>*Ibid.*

<sup>37</sup>Memo, Brig. Gen. Hugh A. Drum, Assistant Chief of Staff, G-3 to Assistant Chief of Staff, SPD, January 7, 1925, WPD 888-22, RG 165, NA.

<sup>38</sup>*Lampert Committee Report*, p. 1.

<sup>39</sup>*Lampert Hearings*, pp. 521-524.

<sup>40</sup>Hurley, *Billy Mitchell*, pp. 93-96.

<sup>41</sup>Letter, Secretary of War to Congressman Randolph Perkins, February 1925, File No. 333.5, Entry 166, RG 18, NA.

<sup>42</sup>Letter, Patrick to C. Frank Williamson, February 27, 1925, Box 8, Entry 228/229, RG 18, NA.

<sup>43</sup>Hurley, *Billy Mitchell*, p. 98. *Army and Navy Journal*, LXII, February 7, 14, 21, March 7, 1925.

<sup>44</sup>Hurley, *Billy Mitchell*, p. 101.

<sup>45</sup>*Ibid.* Shiner, "The Army Air Arm in Transition," p. 40.

<sup>46</sup>*Morrow Board Hearings*, p. 89.

<sup>47</sup>*Ibid.*, p. 1177.

<sup>48</sup>*Ibid.*, p. 71.

<sup>49</sup>*Ibid.*, p. 69.

<sup>50</sup>*Ibid.*, pp. 71-77.

<sup>51</sup>Memo, AG to COAS, September 26, 1925, WPD 888-31, RG 165, NA.

<sup>52</sup>1st Ind., COAS to AG, October 1, 1925, WPD 888-31, RG 165, NA.

<sup>53</sup>*Morrow Board Hearings*, pp. 1247-1269; Memos, Drum to Chief of Staff, September 19 and October 5, 1925, File No. 321.9, Entry 166, RG 18, NA.

<sup>54</sup>U.S., President's Aircraft Board, *Report of the President's Aircraft Board* (Washington, DC: U.S. Government Printing Office, 1925), pp. 19-21.

<sup>55</sup>*Lampert Committee Report*, p. 9.

## **CHAPTER IV**

### **BUILDING THE INSTITUTION**

If the public fight over aviation focused on doctrine and autonomy, the unseen struggle was to put the Air Service on a firm foundation as an institution. When Mason Patrick assumed command, the Air Service was in chaos. Demobilization after the war was so rapid that by July 1919 there were only 2,219 officers remaining from the 20,000 man high, and only 234 were regular officers who could be retained in service after September. Enlisted strength fell in a similar proportions.<sup>1</sup> Funding had dried up almost immediately as well. While the questions of doctrine and organization dominated the public side of the Air Service, money problems dominated day-to-day operations. The 1920's were austere years for the armed services, and the Air Service suffered accordingly. The financial pinch reflected the national mood and the conservative fiscal policies of successive Republican administrations. The watchword of the day was "normalcy," and the public took little interest in looking ahead toward a future that might include military action. And if mere complacency was not sufficient to squelch the cries from the military for increased funding, the rise of the pacifist movement questioned the place of military forces at all.<sup>2</sup>

#### **Budget**

Appropriations for the military were drastically reduced immediately upon conclusion of the war and continued to go down throughout the 1920's. The National Defense Act of 1920 authorized an Army of 280,000 men (half of what the Army

requested), but Congress failed to appropriate sufficient funding to maintain it. In 1921, the Army was reduced to 150,000 men and the next year was further reduced to 137,000.<sup>3</sup> The Republicans were bent on bringing economy to government, and the defense establishment was the target for fiscal reductions. The twenties was the era of big business and President Calvin Coolidge, who assumed office upon the death of Warren Harding in mid-1923, moved to apply business principles throughout the government. He said: "This is a business country and it wants a business government."<sup>4</sup>

Cuts in appropriations to the Army meant proportional cuts in the Air Service, and Mason Patrick entered office at the time when fiscal austerity was just beginning to hinder the continued development of military aviation in the United States. The following six years would be replete with problems stemming from the lack of proper funding, and it was Patrick's success in handling these problems of day-to-day administration that would be his greatest contribution to the Air Service.

When Patrick entered office in October 1921, fiscal year 1922 was already in the second quarter.<sup>5</sup> The Army and Air Service were reeling from the latest cuts in appropriations and scrambling to reduce manpower, equipment, and operating costs. The Air Service budget was down over \$15,000,000 from the previous year, a cut of almost fifty percent. In the following year the appropriation was cut another \$6,500,000, effectively reducing the Air Service direct appropriation by over sixty percent in two years.<sup>6</sup> Patrick realized the threat of further cuts to his already crippled service and refused to let this trend continue. He began to fight to keep what little he had and increase the funding if he could.



Patrick's avenues of approach toward solving his budgetary worries, however, were somewhat limited. The Budget and Accounting Act of 1921 created the Bureau of the Budget and specified that there would be a unified budget for the executive departments of government. The result was that War Department appropriation requests had to be sent to and approved by the Budget Bureau before being presented to Congress. The Bureau reflected the President's desires for minimum spending on defense and generally pared funds from requests coming from the War Department. The law had an additional caveat that effectively eliminated any protest of the Budget Bureau actions. It provided that the executive departments had to support the official budget.<sup>7</sup>

For Air Service appropriations therefore, Patrick had to present a request to the General Staff, who would make its own judgment as to what the Air Service needed and then include the figure in the general War Department budget request. This was then forwarded to the Budget Bureau, who adjusted it to fit the President's conception of the national budget. Once the budget reached the House of Representatives, Patrick could not appear before the Congress and request additional funds. The only agency capable of reversing the President's austerity policies was cut off to Patrick by law. But even if Patrick had been allowed to fight before Congress for more money, he probably would have received little sympathy from the Republican dominated Congress. The only recourse was to continue to point out the insufficiencies in the annual appropriations and hope to persuade the decision makers in the General Staff and the Budget Bureau that increases were critical.

## **Personnel Policies**

One area that repeated budget cuts immediately affected was personnel. Under the National Defense Act of 1920, the Air Service was authorized 1,516 officers and 16,000 men. The successive reductions in Army strength by the War Department appropriations bills for 1922 and 1923 further reduced the authorized strength to 1,061 officers and 8,764 enlisted men. When Patrick assumed command there were approximately 950 officers, but this number fell as non-flying officers were eliminated from the Service under the provisions of the National Defense Act. By March 1923, the Air Service held only 880 commissioned officers.<sup>8</sup> Procuring and retaining officers became the biggest personnel problem for Patrick.

The Lassiter Board, previously mentioned in connection with air doctrine, also studied the shortcomings in personnel pointed out in Patrick's 1922 annual report. In his testimony to the board, Patrick detailed the unique personnel problems of the Air Service.

Basically, the Air Service needed to maintain, at a high degree of proficiency, a large number of pilots in case of an emergency. Patrick held that the long period of time it took to train new flyers made it imperative the U.S. have adequate numbers available at the beginning of a conflict since replacements would not become available for a number of months. Furthermore, Patrick argued that flying was essentially a young man's duty and that the Air Service needed a rapid turnover of younger officers in order to maintain the high level of efficiency required. In order to rectify the situation, Patrick recommended that the Air Service be brought up to a strength of 4,000 officers, the number established by the current Army mobilization plans required for operations on the first day of a national mobilization. In order to attain the high turnover, 1,000 officers would be called

up from the Reserves, "retained while their flying ability is at a maximum," and then returned to Reserve status. In addition, 2,500 flying cadets would be trained each year in order to keep Reserve levels up.<sup>9</sup>

A second problem area for Patrick was finding enough men to fill the quota of permanent officers. The Air Service had lost 38 officers in flying accidents during the previous year and on the average was losing eight percent of its officers annually.<sup>10</sup> The sources of replacement were limited, and Patrick hoped to open new avenues of entry. The National Defense Act permitted officers to be detailed or transferred to the Air Service, but Patrick frowned at relying upon this method. He felt its use would have a detrimental effect upon permanent Air Service officers.

In 1920, a single promotion list for the whole Army had been established. The formula used to determine an officer's position on the list, however, resulted in grouping most Air Service captains and lieutenants at the bottom of their respective categories. Most of these men entered the Service during the war, but because their training as pilots took six to nine months longer than that of their peers who entered on the same day but in different branches, they received their commissions at a correspondingly later date. When it came time to be placed on the promotion list, credit for service was counted from the date of commissioning, so most Air Service officers were far below their peers.<sup>11</sup>

General Patrick recognized transferring in officers from other branches as replacements would place the newcomers over men who had been flying for several years. He felt such a policy would result in the demoralization of men who already faced danger every day and struggled under the most primitive conditions. Beginning in January 1923,

Patrick refused to accept the transfer of officers except in special situations or where they would not be placed above Air Service officers.<sup>12</sup>

Since the portion of West Point graduates assigned to the Air Service could not meet the annual demand for replacements and Patrick declined to accept transfers, he recommended to the Lassiter Board that the necessary men come from Air Service ROTC units. Recent graduates would be given flying training and then be offered permanent commissions if they were judged to be suitable. Since there were only six such units, Patrick advocated the reversal of Congress' ban on further units and then forming new ones at a number of colleges throughout the country.<sup>13</sup>

The Lassiter Board deliberated on Patrick's recommendations and concluded that "the peace organization of the Air Service now bears no relation to the war requirements and affords little or no foundation upon which war requirements in either personnel or material can be built." Its recommendations to the Secretary of War virtually followed word-for-word Patrick's suggestions included in his testimony. The Board's report agreed that the Air Service "should have a strength and organization permitting rapid expansion to meet the ultimate requirements of the war." It called for an Air Service of 4,000 officers, 2,500 flying cadets, and 25,000 enlisted men. The increases would take place over a period of ten years and in order not to drain officers from other branches, the Board recommended that Congress be asked to expand the Army to accommodate the new officers and men. The report, however, made no mention of where the officers and men would come from. The Secretary of War approved the plan in principle and forwarded it to the Joint Board with the suggestion that a joint Army-Navy program be developed in order to avoid duplication of effort.<sup>14</sup>

The Joint Board, however, was not able to come to an agreement. The Secretary of War suggested that the two programs be considered at the same time by the same congressional committee, with the resulting appropriation split between the two services depending on their requirements. The Secretary of the Navy, however, rejected the proposal, fearing that the Army was trying to dictate funding for Navy programs. The situation remained deadlocked throughout 1923 and 1924, effectively blocking any expansion of Air Service personnel.<sup>15</sup>

The situation with the Joint Board did not keep Patrick from continuing to try to improve conditions for his flyers. The Lassiter report even opened the way for a proposal to make sweeping changes in the Air Service personnel system, particularly concerning promotions.

Patrick's concern for the promotion list situation dated from May 1922, when a board of officers, headed by Major General David Shanks, made its report on its study of the single promotion list. While the study did not concentrate on any particular branch, the report concluded: "The Air Service is the only branch or arm of the service which is adversely affected as a corps by the promotion situation." The board, however, was unable to offer any solution to the problem.<sup>16</sup>

Patrick, on the other hand, had plenty of suggestions toward remedying the situation. In December 1922 he wrote to the General Staff about the situation, but only received a "perfunctory statement that the matter had already been considered by General Shanks' Board" as a reply.<sup>17</sup> On January 30, 1923 he sent another memo to the Chief of Staff proposing legislation which included creation of a separate promotion list for the Air Service. On the list, an officer would be promoted at designated intervals instead of

waiting for people ahead of him to retire or die.<sup>18</sup> The Adjutant General returned the memo, requesting a draft of the legislation Patrick thought necessary. On July 30, 1923, after incorporating the recent findings of the Lassiter Board into it, Patrick sent a draft of the bill. It was returned shortly thereafter with a request for additional supporting data, and once that was sent the General Staff decided to hold an investigation of the matter. The board of officers, chaired by Colonel J. E. Woodward, convened on November 15.<sup>19</sup>

Patrick's proposal was a sweeping plan. It not only implemented the Lassiter expansion program, but rewrote many of the rules regulating the Air Service system of procurement, elimination, promotion, and retirement of personnel. The two basic differences between the proposal and the system then in use, were the promotion and retirement structures. The new promotion system set definite intervals for advancement, thus allowing officers to achieve significant rank before they retired. If the Lassiter program proceeded under the regular system, there would have been no room for advancement, and the majority of new officers would remain lieutenants. The retirement system was also revised to recognize the dangers of flying and to prevent stagnation at the higher ranks. The proposal gave flying officers double credit for flying duty because of its dangers, thus making it possible for an officer to retire with fifteen years service. Officers could elect to stay in the Service, but the maximum number of years was set at thirty.<sup>20</sup> The results of the system would be to allow a large turnover of officers—a basic tenet of the Lassiter program—but still permit officers to achieve significant rank before retiring.

The Woodward Board carefully examined Patrick's proposals and thoroughly rejected almost every section. The Lassiter personnel expansion was unnecessary until there was enough equipment for the officers to operate, and that program was still being

considered by the Joint Board. The separate promotion list was unnecessary because officers were available to fill higher command positions; the Chief of Air Service was just unwilling to allow the transfers. In addition, a separate promotion list would prevent any crossover between branches. And to cap the argument off, a separate list would create disparities in promotion rates resulting in "general dissatisfaction in the service" and start a split between the Air Service and the other branches. The proposed retirement system was also rejected because it would increase the burden on the government by allowing early retirements. In general, the Board felt that the proposed legislation was "endeavoring to capitalize on, for the benefit of individuals now in the Air Service, certain temporary and passing conditions."<sup>21</sup>

The rejection of the elaborate plan for a separate promotion list and special retirement system was a defeat for Patrick, but he did not give up the campaign for sufficient numbers of men. In June 1924, he proposed new legislation to carry out the Lassiter personnel program. This time, however, the sections on promotion and retirement were deleted. The results, however, were the same: no legislation was forwarded to Congress.<sup>22</sup>

## **Equipment**

The Air Service equipment situation during the first years of Patrick's tenure was one of contradictions. On the one hand, its lack of adequate funding forced the Air Service to rely heavily on surplus war stocks and other economic measures. On the other hand, the United States led the world in advancing aviation technology with the Air Service Engineering Division serving as a catalyst for research and development. Patrick had to

balance the two sides while concentrating on his ultimate object of keeping the Air Service in the air.

Patrick took command of an Air Service scattered over the entire country with large numbers of stations and inadequate personnel to man them. In October 1921, there were 21 equipment and storage depots containing the huge amounts of war-built aircraft and accessories. Patrick moved to consolidate them for better accounting and eventually all Air Service property was concentrated into five locations, each depot responsible for a certain area of the country or type of equipment. In addition, all flying training activities were transferred onto two fields outside San Antonio.<sup>23</sup> At the end of his first year, there were only 27 Air Service properties remaining, of which four were being sold and several others being deactivated.<sup>24</sup>

The state of Air Service aircraft and flying equipment, however, was Patrick's greatest concern. Great numbers of aircraft built during the last months of the war were rapidly decaying into useless pieces of junk. They could not be discarded outright because of public opinion, but most were unfit to fly without extensive refurbishing. In 1922, Patrick had 3,369 planes in inventory, but only 910 were in usable condition.<sup>25</sup> Procurement of airworthy aircraft was imperative.

The rapid rate of change in aircraft design, however, presented a problem when trying to decide on the proper plane to buy. Because it took up to eighteen months for a plane to be delivered once an order was placed, most designs became obsolete in some manner during the interim. Early in 1922, Patrick was faced with this dilemma when trying to decide on how to allocate the \$5,000,000 earmarked for aircraft procurement in the fiscal year's budget. Due to the rapid design changes, he decided against ordering new



pursuit and observation planes even though they were badly needed. With permission from Congress, he returned \$1,399,000 to the Treasury.<sup>26</sup> The action was courageous because many airmen were already clamoring that not enough funds were available to begin with and because Congress might interpret it to mean the Air Service needed that much less in future appropriations.

In order to keep the Air Service flying Patrick decided to refurbish and fly war stock planes. The design of the DeHaviland DH-4 observation plane had not been totally surpassed in the post-war years, and it would suffice until a standard new design was developed. In addition, the appropriations for new aircraft procurement were falling, and the cost of refitting an old plane was well below that of buying a new one. Until appropriations increased and standard types were agreed upon, use of old aircraft offered the best method of maintaining the necessary numbers of planes.<sup>27</sup>

The search for standard types of planes, then, made 1921 to 1925 the heyday of research and development. Moneys for experimental work accounted for a quarter of the direct Air Service appropriations and came close to equaling those marked for aircraft procurement.<sup>28</sup> The Air Service's Engineering Division, located at McCook Field in Dayton, Ohio, was the focal point for all developmental work. It tested and evaluated aircraft, aircraft designs, engines, and other aircraft equipment offered by the aviation industry for Air Service procurement. It also conducted its own work in developing equipment unique to military aviation. Early developments in parachutes, bombs, bomb racks, armament, superchargers, and cockpit instruments emerged from the laboratories at McCook Field.<sup>29</sup> In 1925, Patrick credited the work of the Division with keeping the

United States "at least abreast and probably somewhat in advance technically of all other countries in the world."<sup>30</sup>

But advancing aviation technology and keeping the Air Service flying through refurbishment did not solve the basic problem of equipping an air arm with new aircraft in adequate numbers. The majority of planes in the Air Service inventory were observation types with little or no combat potential. Furthermore, the numbers available would continue to decrease as refurbished DH-4's wore out and war stocks were depleted. Pursuit and bombardment aircraft—the core of any offensive air force—were under development, but due to the intricate workings of the budgeting system, funds for their development probably would not become available until the fiscal year following completion of their design. In his testimony to the Lassiter Board in March 1923, Patrick predicted that "with the present Air Service appropriations and those now in sight, the airplanes available for combat duty in the Air Service will be reduced to less than 300 by July 1, 1926."<sup>31</sup>

The Lassiter Board report recognized the serious equipment shortages of the Air Service, saying that the United States could not "improvise an Air Service." In order to build the service up to a level adequate to meet the first demands of a war, the board recommended a ten year building program that would result in a force of 2,500 planes. The program would need annual appropriations of \$25,000,000, of which \$15,000,000 would be dedicated to new aircraft procurement.<sup>32</sup> The report and its recommendations was sent to the Army-Navy Joint Board to be combined with the Navy's Air Service expansion program, but no agreement could be reached, and the report was never sent to Congress.

Patrick, however, refused to wait for Joint Board action on the Lassiter report and fashioned his annual budget requests to match those included in the Lassiter program. In late 1923/early 1924, when the War Department formulated its budget proposal for fiscal year 1925, Patrick requested a \$25,000,000 appropriation. By the time it reached the House Appropriations Committee, Patrick's figure had shrunk to \$12,435,000.<sup>33</sup> In addition to this new request, however, Patrick was allowed to ask for use of the \$1,399,000 he refused to use in 1922. Congress renewed the funds, marking \$399,000 for payments on contracts remaining from 1922, and giving the remaining \$1,000,000 to procurement of new aircraft. Added to the \$2,646,000 in the new money request for procurement, Patrick was able to buy approximately 200 new planes.<sup>34</sup> The net result of the new appropriations added to the 1922 money was a total above that of fiscal year 1924. Without the \$1,399,000 becoming available, the 1925 appropriations would have been almost identical to those in 1924. Patrick's judicial decision in 1922 resulted in the reversal of the downward trend in Air Service funding. Fiscal year 1925 marked the beginning of a series of budget increases that lasted until 1931.<sup>35</sup> The increases were just in time, too. By the beginning of fiscal year 1925, the Air Service was down to 1,592 planes with only 829 in commission.<sup>36</sup>

### **The Aviation Industry**

In addition to throwing the Air Service into chaos, the rush back to peacetime levels disrupted the aircraft industry, which had been a wartime creation. With no demand for aircraft from any civilian concerns and with the rapid cuts in Army funding, the industry went into a nose-dive. Demobilization also crippled the aircraft industry.

Existing orders for 13,000 planes and 20,000 engines were canceled within a few days of the signing of the Armistice. Factories closed and workers departed as demand dried up. By 1919 ninety per cent of the industry built up by the billion dollars appropriated for aviation during the war had been liquidated. The large war surpluses remaining after the war did not help the situation. The Army Air Service continued to use these wartime planes and engines throughout the 1920's, and most of what little civilian demand for aircraft after the war was also satisfied by sales of this surplus equipment. For example, William E. Boeing's aircraft plant switched to producing furniture until an Army order in 1921 allowed him to build planes again.<sup>37</sup>

The aircraft manufacturing structure which existed when Mason Patrick assumed command of the Air Service in 1921 was like a punch-drunk boxer on the verge of collapse. Only a few intrepid companies refused to succumb to the disastrous effects of post-war demobilization and lack of alternative commercial markets. Within three months of the signing of the armistice, the aviation industry shrunk to a tenth of its wartime peak. Close to \$100,000,000 in contracts were canceled overnight and by 1920 only \$5,000,000 of the hundreds of millions of dollars of capital investment poured into aviation during the crisis remained.<sup>38</sup> The situation was further complicated by the complete absence of any demand for new planes. Even orders from the military air arms dried up due to the huge surpluses of DH-4's remaining after the war. Not until late 1920 and early 1921 were new contracts for military aircraft let out, but the relief for the beleaguered manufacturers was only temporary. The orders were for limited numbers of planes and future contracts were uncertain at best. In addition to the scarcity of contracts government contracting policies forced desperate companies to make suicidally low bids in order to secure work. As a

result, many businesses took disastrous losses or barely broke even. For example, in 1923 Consolidated Aircraft Corporation grossed a profit of only \$201.98 on sales of \$211,000.<sup>39</sup>

Patrick was aghast at the condition of the industry when he took office and immediately moved to do everything in his power to revive it. He based his concern on the knowledge that a strong, vital industrial complex would be the basis for successful air operations in any future national emergency. The experience of World War I made it obvious that a large aviation manufacturing structure in being was a necessity at the beginning of hostilities. Any country without such facilities invited decimation of its air arm and air operations capabilities. Statistics from World War I showed that in war the average life span of single-seat fighters was six weeks, while that of two-seaters only two weeks more. Based on these figures and the projected war time strength of the Air Service, planners estimated that one hundred percent of the Air Service's combat aircraft would have to be replaced within the first two months of hostilities. Included in the estimate was the assumption that the Air Service would enter the war at full wartime strength and that it would already have a one hundred percent reserve.<sup>40</sup> If production facilities were not already operational at the outbreak of war, it would take from eleven to eighteen months to meet Air Service requirements, depending upon the type of plane manufactured.<sup>41</sup> It was imperative that the American aviation industry that existed in the early 1920's be rebuilt and expanded to a level capable of meeting projected wartime needs.

The problems of stimulating the aviation industry were immense ones for Patrick. The lack of standardized designs and adequate funding for aircraft procurement kept him

from ordering more planes. The federal government was not subsidizing the fledging industry as most other countries did and Patrick had to find alternative methods. The most obvious method was to eliminate any competition from government facilities. At that time, the Air Service's Engineering Division at McCook Field in Dayton, Ohio was involved in design and production of new aircraft. Patrick was besieged by complaints from the civilian manufacturing companies charging that concentration of design functions in the Air Service's own production complex was unfair and would result in the elimination of the manufacturers sole source of orders. Designing new aircraft was the lifeblood of most companies and the government's policies would at best reduce a company to a mere construction firm.<sup>42</sup> In response to these complaints, Patrick ordered McCook Field to halt any designing aimed at producing new Air Service aircraft. He was convinced that civilian manufacturers and designers had the expertise necessary to produce top quality airplanes<sup>43</sup> The 1922 air races in Detroit proved this point. The Curtiss airplanes in particular showed themselves to be superior to any produced up to that time.<sup>44</sup> Design projects at McCook Field thereafter were confined to equipment unique to military aircraft, such as bomb racks and armaments. The Air Service Engineering Division became responsible for testing and approving new designs submitted for acceptance by civilian firms. Construction of aircraft at the Dayton base was also halted. In the years of Patrick's tenure only twenty-seven aircraft were built at the McCook Field facilities.<sup>45</sup>

Elimination of government competition, however, was a simple step compared to the fight Patrick undertook to gain greater control over the contracting process. He hoped to revise Army contracting policy in order to allow him to insure that the best qualified companies received government contracts and thus insure their continued

existence. In addition, he moved to eliminate the practice of forcing a designer to sell the design rights of his new aircraft to the government and thus possibly losing the contracts to produce the aircraft for the Air Service.

When Patrick assumed command of the Air Service government contracting policy was based on the concept of competitive bidding. Whenever a contract was to be let, the government agency had to call for bids from interested companies. The strict wording of the law forced the agency to almost invariably award the contract to the company with the lowest bid. There was little consideration for the ability of the company to fulfill the contract or its qualifications to produce the best product. The only way around the requirements was if the contractor was the sole source of supply or if the item in question was patented. Because there were always a number of eager contractors and because airplanes could not be patented, these loopholes had little influence on the aircraft industry. The competitive bidding policy was perceived by Patrick and many aircraft manufacturers as devastating to the industry. Under the system all contracts had to be advertised for bids and companies that spent hundreds of man-hours and thousands of dollars designing a new aircraft could not be sure they would receive the final assembly contract.

The contracting process worked in the following manner. A company, with no government subsidy or guidance, created a new aircraft design and built an example prototype. The plans and prototype were sent to McCook Field for evaluation and testing. If the Air Service subsequently accepted the plane for production, the company had to sell the prototype, plans, and all rights to the plans to the Air Service. In order to produce the required number of planes, the Air Service was forced to advertise for bids.

The original designing company, knowing the construction problems likely to be encountered and wishing to recover its design and development costs, would submit a bid considerably higher than that of other companies who had no previous costs. The Air Service, following the letter of the law, was bound to give the contract to the lower bidder. In the desperate days of the 1920's many companies made suicidally low bids in order to win contracts. When production problems sprang up and increased costs the companies could no longer produce the planes at the contract price and the resulting losses forced many companies to go bankrupt. The Air Service did not receive its planes, the designing company gained nothing for its efforts, and in many cases, another company went bankrupt, had huge losses, or at best made slim profits.<sup>46</sup>

The results of such a policy are best illustrated by the example of the Martin Mb-2 bomber. Successive contracts were let to four different manufacturers, Glenn Martin the designer, L.W.F. Engineering Corporation, Curtiss Aeroplane and Motor Corporation, and Aeromarine. L.W.F. Engineering went bankrupt; Curtiss Aeroplane lost \$249,000; and Aeromarine collapsed shortly after completing the contract. The planes produced were shoddily constructed and failed to meet original standards. Parts from the same design, but built in different factories, could not be interchanged and the four different planes did not have the same performance capabilities.<sup>47</sup> There were other examples of the same phenomenon where a good design was rendered ineffective because of incompetence on the part of the manufacturer and Patrick saw that highly qualified designers were being forced out of the market to the detriment of the industry and national security.



Patrick's options for correcting the situation in the aviation industry were limited, but he pushed vigorously for change in the contracting statutes and awarded contracts without taking competitive bids whenever he could. Beginning with his first annual report in 1922, Patrick pointed out the crippling effects of the procurement policy. He urged that when the designer's price was reasonable he be "awarded production contracts without advertising for competitive bids."<sup>48</sup> In speeches to civic groups, business meetings, the General Staff, and particularly to Congress, he hammered the point and how the national security would be affected by the loss of the aviation industry. On a parallel line, Patrick pushed for recognition of property rights.

In the eyes of the law and the Army Comptroller General, new designs for aircraft were not patentable because they did not make basic changes or developments in aircraft technology. Without a patent a manufacturer could not claim sole rights over his new design. As a result, the Air Service could not claim that the designing company was the sole supplier and therefore, had to advertise for competitive bids before letting the contract.<sup>49</sup> If Patrick could win approval of his proposal to recognize that a designer had property rights over his own designs, then the Air Service could award the production contract to the designer because he would legally be the sole supplier of the aircraft. Such a step would circumvent the requirement for competitive bidding without having to await changes in the wording of the contract laws.

Patrick's efforts, however, fell on deaf ears in the Congress. The aircraft production scandals of World War I made Congressmen wary of any proposal aimed at benefiting aircraft manufacturers. In addition, the success of competitive bidding in other sectors of government made the proposals appear to be even more self-serving.

Undaunted, Patrick continued to push for change in the law or, at least, administrative permission to award contracts to manufacturers other than those who submitted the lowest bids.

In 1924, Patrick met with initial success. After listening to arguments from Patrick and the aircraft manufacturers, Assistant Secretary of War Dwight Davis, who supervised all War Department procurement, was convinced that something had to be done. He decided that the practice of buying the design rights for a new aircraft and submitting it to competitive bidding was unfair to the designer and eventually led to the weakening of national defense. Using his authority as chief contracting officer for the War Department, Davis ruled that the government would "recognize and sustain the principle of proprietary design rights" in regard to aviation materials and that the government would not "purchase or acquire design rights for aircraft" when the articles came from established manufacturers.<sup>50</sup> With this ruling in hand, Patrick invoked paragraph 4g(1) of Army Regulation 5-240 which allowed him to contract without bidding because the planes were purchased from a sole manufacturer. From then on, whenever a successful design was presented and accepted by the Air Service, Patrick carefully weighed the manufacturer's ability to produce operational copies of the design. If the company had sufficient facilities and skill in manufacturing, it would have the opportunity to take the contract provided the price was reasonable. Competitive bidding still remained the official policy of the War Department, but the restrictions were relaxed when deemed appropriate by Patrick and the Assistant Secretary of War.<sup>51</sup> The result was to reassure manufacturers that their design efforts would not go toward enriching another company and, in turn, stabilized the industry by instilling confidence that the future held some degree of certainty. In addition,

Patrick's new leeway allowed him to begin to build an industry which filled the projected needs of the Air Service. He moved to insure that there were at least two manufacturers of each type of aircraft in the Air Service inventory. In the event of war, the country would have the core of industry necessary to meet its basic emergency needs until industrial mobilization caught up to demand.<sup>52</sup>

During the 1920's, Patrick faced the arduous task of shoring up the ailing aircraft industry. Faced with the lack of funds for procurement, he turned to other avenues to stimulate design and production and minimize the loss of expertise. Elimination of government competition and getting administrative recognition of proprietary design rights aided the campaign. Patrick continued to push for legislative action to revise the procurement laws in his testimony before the Lampert Committee and the Morrow Board and by the beginning of 1926, had strong backing for his proposals from manufacturers. The issue would be an important part of the coming Congressional debates as the two houses attempted to write the comprehensive Air Service bill.

## Notes

<sup>1</sup>*Army Air Forces Historical Studies: No. 39*, pp. 1416.

<sup>2</sup>Pacifists advocated disarmament and the outlawing of war in general. The great novelists of the era, such as Hemingway and Faulkner, reflected the anti-war sentiment in their writings. See Tate, "The Army and Its Air Corps," p. 42; Russell F. Weigley, *History of the United States Army*, (New York: MacMillan Publishing Co., Inc., 1967), p. 402.

<sup>3</sup>Weigley, *History of the United States Army*, pp. 400-401.

<sup>4</sup>New York Times, October 24, 1924, quoted in Arthur M. Schlesinger, Jr., *The Crisis of the Old Order, 1919-1951* (Boston: Houghton Mifflin Company, 1957), p. 61. See also, Tate, "The Army and Its Air Corps," p. 43.

<sup>5</sup>During this period, fiscal years ran from July 1 to June 30.

<sup>6</sup>Chart labeled "Cost of Army Air Service," File No. 059A, Entry 166, RG 18, NA.

<sup>7</sup>Weigley, *History of the United States Army*, p. 401.

<sup>8</sup>"Testimony to the Lassiter Board", p. 7; U. S. War Department, "Annual Report of the Chief of Air Service, 1921." (microfilm), USAFA, p. 17.

<sup>9</sup>"Testimony to the Lassiter Board", pp. 3, 7-8.

<sup>10</sup>*Ibid.*, p. 7.

<sup>11</sup>*Army Air Forces Historical Studies: No. 39*, p. 94.

<sup>12</sup>*Ibid.*, p. 97; Memo, COAS to the Secretary of War, February 8, 1924, Box 7, Entry 228/229, RG 18, NA.

<sup>13</sup>"Testimony to the Lassiter Board," p. 3.

<sup>14</sup>"Lassiter Board Report", pp. 1-5.

<sup>15</sup>"Chronological Record of Action Taken on the War Department Committee Report on the Organization of the Air Service," in *1926 Hearings*, p. 587.

<sup>16</sup>Memo, COAS to AG, October 15, 1923, pp. 3-4, File No. 032, Entry 166, RG 18, NA.

<sup>17</sup>*Ibid.*, p. 4.

<sup>18</sup>Memo, COAS to the Chief of Staff, January 30, 1923, WPD 888-1, RG 165, NA.

<sup>19</sup>"Report of a Board of Officers Convened to Examine Into and Report Upon Proposed Legislation Concerning Air Service Personnel," January 23, 1924, WPD 888-1, RG 165, NA. (Hereafter referred to as Woodward Board Report).

<sup>20</sup>Memo, COAS to AG, October 15, 1923, pp. 1-18. The complex system recognized aviation's high risks and compensated the officers exposed to them. Based on the fatal accident rate at that time, Patrick estimated the average aviator's life to be 12+ years. Using this figure, an officer would have to beat the odds to reach the point where he could retire.

<sup>21</sup>"Woodward Board Report," pp. 1-24.

<sup>22</sup>Memo, COAS to AG, June 9, 1924, File No. 032, Entry 166, RG 18, NA.

<sup>23</sup>Patrick, *The United States in the Air*, pp. 91-93. The depots were located in Middletown, PA. (East Coast Area), Fairfield, OH. (Midwest Area), San Diego, CA. (West Coast, Hawaii, Philippines Area), Little Rock, AR. (Aircraft Engines), and San Antonio, TX (Flying School equipment).

<sup>24</sup>"Annual Reports of the Chief of Air Service, 1922," p. 27.

<sup>25</sup>U.S., Congress, House, Committee on Appropriations, *Hearings on the War Department Appropriations Bill for 1924*, 67th Cong., 2nd sess., 1923, p. 495.

<sup>26</sup>Patrick, *The United States in the Air*, pp. 95-96; U.S., Congress, House, Committee on Appropriations, *Hearings on the War Department Appropriation Bill for 1925*, 68th Cong., 1st sess., 1924, pp. 901-902.

<sup>27</sup>*Lampert Hearings*, p. 526; Patrick, *The United States in the Air*, pp. 96-97. The last DH-4 's were not phased out of the Air Service inventory until after Patrick retired. Appropriations for new procurement fell from \$5,300,000 in FY 1922 to a low of just under \$3,000,000 in FY 1924.

<sup>28</sup>*Army Air Forces Historical Studies: No. 50 Material Research and Development in the Army Air Arm. 1914-1945* (AAF Historical Office, 1946), p. 49; Chart labeled "Cost of Army Air Service" in File No. 59A, Entry 166, RG 18, NA.

<sup>29</sup>*Army Air Forces Historical Studies: No. 50*, p. 22; Memo, Patrick to R. W. Ireland, January 6, 1925, Entry 228/229, RG 18, NA.

<sup>30</sup>Patrick to Ireland, January 6, 1925.

<sup>31</sup>"Testimony to the Lassiter Board," p. 6. Fiscal years ran from July 1 to June 30. Appropriations hearings usually began in the preceding December or January. Budget requests from the various branches obviously had to be submitted several months prior to that date so that they could be examined by the War Department and then approved by the Budget Bureau. Consequently, funds spent near the end of a fiscal year may have been planned for up to 20 months in advance of their actual expenditure. Justification for funds anticipating new design development so far in the future was hard to sustain. Examination of Air Service appropriations records show that War Department-approved appropriations from 1921-1924 usually were based on the previous year's actual appropriations, with little advance planning for new developments.

<sup>32</sup>"Lassiter Board Report," pp. 3-4.

<sup>33</sup>*Morrow Board Hearings*, p. 65.

<sup>34</sup>U.S., Congress, House, *Appropriations Hearings, 1925*, p. 901.

<sup>35</sup>Edwin H. Rutkowski, *The Politics of Military Aviation Procurement, 1926-1954* (Columbus: Ohio State University Press, 1966), p. 256.

<sup>36</sup>U. S., Congress, House, *Report of the Select Committee of Inquiry into Operations of the United States Air Services, House Report No. 1653* (Washington, DC: U.S. Government Printing Office, 1925), pp. 22-23. (Hereafter referred to as *Lampert Committee Report*).

<sup>37</sup>Goldberg, *History of the USAF*, p. 29; Elsbeth E. Freudenthal, *The Aviation Business: From Kitty Hawk to Wall Street* (New York: The Vanguard Press, 1940), p. 6.

<sup>38</sup>John B. Rae, "Financial Problems of the American Aircraft Industry, 1906-1940," *Business History Review* (Spring 1965), p. 103.

<sup>39</sup>*Ibid.*, p. 104.

<sup>40</sup>Paper entitled "The Relation of an Aeronautical Industry to National Defense," 1923, in Box 1, Entry 228/229, RG 18, NA.

<sup>41</sup>Speech by Assistant Secretary of War Dwight F. Davis to the St. Louis Aeronautic Corporation and the Flying Club of St. Louis, October 1, 1923, Box 1, Entry 228/229, RG 18, NA.

<sup>42</sup>*Lampert Hearings*, p. 985.

<sup>43</sup>*Ibid.*, p. 130.

<sup>44</sup>*Ibid.*, p. 990.

<sup>45</sup>*Army Air Forces Historical Studies: No. 50*, p. 30.

<sup>46</sup>*Morrow Board Hearings*, p. 1729; Patrick's testimony to the various investigatory boards; Rutkowski, *The Politics of Military Aviation Procurement*, pp. 199-200.

<sup>47</sup>Rutkowski, *The Politics of Military Aviation Procurement*, p. 288.

<sup>48</sup>"Annual Report of the Chief of Air Service," 1922, p. 67.

<sup>49</sup>*Morrow Board Hearings*, pp. 1792-1730.

<sup>50</sup>*Ibid.*, p. 7.

<sup>51</sup>*Ibid.*, p. 67; Rutkowski, *The Politics of Military Aviation Procurement*, pp. 261-262.

<sup>52</sup>*Morrow Board Hearings*, pp. 67-68.

## CHAPTER V

### THE AIR CORPS ACT OF 1926

At the beginning of 1926, Congress, the General Staff, and the Air Service knew the time for change had come. The seven years since the end of the war had seen gradual acceptance of the airplane as an important instrument of war and a growing realization that aviation was to be an integral part of American society. The American public was increasingly aware of the need for a military air force and businessmen were starting to realize the airplane's potential. Through its many investigating committees, Congress also had a deeper understanding of aeronautics. Finally, in the Army, the activities of Mason Patrick and Billy Mitchell were forcing old foot soldiers to turn their eyes skyward, if even for just a brief glance. Throughout all levels of the national decision-making structure, there was a begrudging acknowledgment of the need for change, the problem was to turn that awareness into concrete action.

In January and February, 1926, the first bills specifically based on the Lampert and Morrow reports were introduced having been written by parties on both sides of the aviation independence issue.<sup>1</sup>

On the Air Service's side, Patrick wrote a bill at the request of the House Committee on Military Affairs embodying his ideas for autonomy. The bill was introduced by Representative J. Mayhew Wainwright on January 28 and contained the basic reforms Patrick had fought for over the previous five years. It called for creation of an Air Corps separate from direct army command, but under the supervision of a new Assistant Secretary of War. The Air Corps would assume all administrative control over Air Corps

assets, but detachments assigned to other services would be under the operational control of the main unit commander. The bill also addressed the problem of personnel and included provisions that would adjust the placement of officers on the promotion list by giving credit for time spent in training. Specific manning levels for non-flying officers allowed to transfer from the regular Army into the new Air Corps were set. Finally, the bill provided that the Air Corps would have control over its own budget and would reimburse the Army for any services received.<sup>2</sup> A few days later, Representative W. Frank James introduced a bill to implement the provisions of the Lassiter Board providing for a ten year expansion plan for Air Service personnel and equipment. The combination of the Wainwright and James bills would have fulfilled Patrick's greatest hopes and given the Air Service a tremendous boost.<sup>3</sup>

On the other side of the fence, however, the Coolidge administration was determined to implement the recommendations of the Morrow Board. The report called for only token changes in the relationship between the Air Service and the Army. The standard answers to the personnel problem were reiterated and no relief was given in officer standings on the promotion list. The only hopeful provision called for a five year expansion program for aircraft and manpower. On January 18, Representative John Morin introduced a bill that the Army General Staff helped write that would implement these provisions.<sup>4</sup>

In the Senate, the process repeated itself. Senator William Hill introduced a bill aimed at implementing the recommendations of the Lampert Committee and calling for creation of a Department of National Defense with a separate air arm.<sup>5</sup> The Hill bill was



quickly countered by a bill proposed by Senator James Wadsworth which was almost identical to the Morin bill in the House.<sup>6</sup>

When hearings on the proposed bills began the battle lines were firmly drawn. Three differing camps were pitched: one for a totally new Department of Defense with a separate air arm; one supporting Patrick's halfway plan for an autonomous air arm; and one for retention of the status quo. The committees gathered evidence from all sides and the proceedings were a recapitulation of all arguments pro and con that were ever presented in the preceding years of confrontation.

In his testimony, Patrick reiterated the reasons behind his proposal for an autonomous air corps and the reforms needed to make it a viable part of the national defense. He pressed home his belief that the national defense partially depended upon a strong air force and that in time of war, no armed effort would be effective without the contributions of the use of airplanes. In order to effectively build such a force, the commander of the air corps needed control over employment doctrine, training, manpower, equipment, and the budget. Above all, the air arm had to be free from the cumbrances placed on it by higher commanders who had no expertise in air affairs. In addition, the Air Service, as it then stood, desperately needed more money for modernization of equipment.<sup>7</sup>

The War Department responded with the usual arguments for the necessity of unity of command and the primacy of the ground forces. This time, however, they had the additional argument that they were now willing to implement the provisions of the Morrow Board's report and grant limited concessions to the Air Service. Minor changes

would be made, but the basic power structure would remain unchanged. The conservative view had the backing of the President which made it an even more powerful argument.<sup>8</sup>

Throughout the spring and early summer the two houses hammered out the legislation that would become the Air Corps Act of 1926. The House Military Affairs Committee was unable to agree on any of the introduced bills and wound up writing one of their own. The more conservative Senate quickly passed the Wadsworth bill favored by the administration but it took two months for the conference committee to hammer out a compromise bill. Finally, on June 29, a final version passed the test of the conference committee and moved back to the floor of the two houses where it gained easy passage. President Coolidge signed it into law on July 2, 1926.<sup>9</sup>

To many air enthusiasts, the Air Corps Act was a grave disappointment because it failed to give the Air Service independent status. It did, however, begin to remedy many of the deficiencies Patrick tried to correct throughout his tenure. Patrick felt the bill was a large step in the right direction even if it failed to carry out his personal proposals. In a letter to the chairman of the House Military Affairs Committee, he said that while he still felt the country ultimately needed a Department of Defense, he agreed with the major provisions and felt it would "materially increase the efficiency of the Army Air Corps."<sup>10</sup>

The act consisted of five major areas of change or reform. First, the Air Service changed its name to the Air Corps in recognition of the air arm's growing importance in military operations. It could no longer be considered just an auxiliary or service unit of the army. The name change implied that air power would have a distinct role in future wars with missions unique to the air.<sup>11</sup>

Second, the bill revised personnel policies. The Chief of the Air Corps received two additional assistants with the rank of brigadier general. Manpower authorizations increased to 1,514 officers and 16,000 enlisted men. 90% of the officers in each grade were required to be pilots and all units had to be commanded by flyers. Flying pay was formalized as 50% of base pay and made available to all personnel involved in regularly scheduled flying duties. In cases where a junior officer had to assume a job that would normally be performed by a higher ranking officer, the Chief of the Air Corps could temporarily promote the officer to the higher rank. Finally the bill ordered a study of the alleged injustices suffered by the Air Service because of the single promotion list.<sup>12</sup>

Third, the act greatly increased the level of air expertise within the offices of the Secretary of War and on the General Staff. A second Assistant Secretary of War was authorized charged with supervision of the Air Corps. This position would allow closer insight into day-to-day operations but also created a direct link between the Air Corps Chief and the Secretary of War for the first time. Within the General Staff, the Army was directed to create an air section, manned by aviators, in each branch.<sup>13</sup>

Fourth, the bill provided for a five year expansion program in personnel and equipment. 403 officers and 6,240 enlisted authorizations were added to the rolls. In addition, the president was authorized to call up Air Corps Reserve officers for up to one year of service. On the equipment side, the Air Corps was authorized to build up to an inventory of 1,800 planes and replacement aircraft could be bought at a rate of 400 per year. Unfortunately, the wording of the provision was more suggestive than directive allowing the President to delay action in requesting necessary appropriations. In addition,

Congress failed to authorize an overall increase in the size of the Army which the Air Corps could receive more people only by cutting manpower from other Army branches.<sup>14</sup>

The fifth and final provision was the section relating to civil aviation and aircraft procurement practices. Basically, the provision required that design competitions be held when Air Corps bought new equipment. The Air Corps was required to advertise the competition in leading magazines and accept bids from anyone. In principle, the lowest bidder with an acceptable design would get the contract. If a design was chosen and then the Air Corps decided that the designer could not reliably produce the equipment, the Air Corps was authorized to buy the design and hold another competition to select a manufacturer. The bill, however, had two loopholes which allowed the Air Corps to negotiate for new planes without holding a design competition. First, the Air Corps could contract for experimental planes without advertising and then if the plane proved to be the best available the Air Corps could contract for production from the designer. Second, the law was not retroactive to designs submitted before passage of the bill. Even if the new design was not proven until a later date, the Air Corps was still allowed to buy without a competition.<sup>15</sup>

For Patrick, the Air Corps Act of 1926 provided both satisfaction and disappointment. That the Air Corps Act did not separate the air arm from the army was considered by many to be a defeat, but Patrick saw that it represented the first step toward his goal. The elevation of the air arm to Corps status recognized the doctrinal importance of aviation and tacitly acknowledged that the air arm provided air force as well as air service.

In personnel matters, the act provided relief for many of the Air Service's problems. It authorized increases in manning and guaranteed the primacy of flying officers in command positions. Patrick's suggestion that the Army Reorganization Act be amended to base the 90% level for flying officers on each grade instead of the total figure was implemented to the letter. In this manner, he created more openings for non-flying officers and this allowed him to keep experienced transferees beyond the one year they had to qualify as pilots before they were sent back to their original branches. The biggest disappointment for Patrick was undoubtedly the failure of the act to implement some kind of relief in promotions. The act called only for a study of the problem by a select committee, but it had no power other than to issue a report. The demoralizing effects of the slow promotions were probably Patrick's biggest problem.

The five year expansion program was Patrick's greatest success. It was a huge step toward alleviating his critical equipment problems that he first identified to the Lassiter Board in 1923. Although he knew even the new levels would not be enough in time of emergency it was a definite move in the right direction.

The provisions directing design competitions constituted a setback for Patrick. He continued to feel he should have the power to negotiate with established firms to get the best possible product. He also wanted the flexibility to direct contracts to companies most in need of the business in order to preserve the aviation industrial base. Under design competition rules, companies would have to hope their airplane was suitable and priced low enough to win the contract. Patrick no doubt felt that it was better to keep established firms open than to rely on a system that allowed little guarantee of a stable

base for the aviation industry. The loopholes created in the legislation offered Patrick some flexibility, but their effect could be only very limited.

Overall, the Air Corps Act is considered a defeat for aviation, but for considering Patrick's deliberate approach and strategic vision, it must be considered a success. The bill addressed major recurring problems, acknowledged the growing importance of air power, and moved the air arm down the path toward autonomy/independence.

## Notes

<sup>1</sup>Drucker, *Digest of Legislative Proposals*, Tab A, p. 6, Tab B, p. 1; 1926 Hearings, pp. 1, 234-235.

<sup>2</sup>1926 *Hearings*, pp. 321-321; Letter, Patrick to Congressman Wainwright, February, 1926, Box 52, Entry 032, RG 18, NA.

<sup>3</sup>1926 *Hearings*, p. 907; 1st Ind, COAS to AG, February 13, 1926, Box 52, Entry 032, RG 18, NA.

<sup>4</sup>1926 *Hearings*, pp. 123-125.

<sup>5</sup>Drucker, *Digest of Legislative Proposals*, Tab B, p. 2.

<sup>6</sup>*Ibid.*

<sup>7</sup>1926 *Hearings*, pp. 256-301.

<sup>8</sup>1926 *Hearings*, pp. 496-499.

<sup>9</sup>*Ibid.*, p. 10674; *Army Air Forces Historical Studies: No. 25*, p. 77.

<sup>10</sup>Letter, Patrick to W. Frank James, May 4, 1926, File No. 321.9, Entry 166, RG 18, NA; *Army Air Forces Historical Studies: No. 25*, p. 77.

<sup>11</sup>*Army Air Forces Historical Studies: No. 25*, pp. 78, 117.

<sup>12</sup>*Ibid.*, pp. 78-79, 117-118.

<sup>13</sup>*Ibid.*., pp. 79, 119, 121.

<sup>14</sup>*Army Air Forces Historical Studies : No . 25*, pp. . 79, 120-121; *Army Air Forces Historical Studies: No. 39*, p. 32.

<sup>15</sup>Rutkowski, *The Politics of Military Aviation Procurement*, pp. 205-206, 247-255.

## CHAPTER VI

### CONCLUSION

When Major General Mason Patrick took command of the Air Service it was facing the gravest type of organizational crisis. It had no sense of official identity and at the same time was struggling for its very existence. The post-war demobilization threatened to make the Air Service a token air force with few planes and the bare minimum of personnel. At the core of the problem was the fact that the Air Service and its superiors in the Army General Staff had two diametrically opposed ideas of the role of aviation in warfare. On the one hand, aviation enthusiasts felt air power had uses far beyond those demonstrated in World War I. The Army high command, on the other hand, believed that airplanes were useful only for direct support of ground forces. The almost total lack of practical experience in aviation on both sides of the controversy made the debate even more heated as both sides tried to argue doctrinal questions from a completely theoretical point of view.

To revive the Air Service and make it a viable part of the U.S. defense structure, Patrick concentrated in two areas. He first fought for acceptance of air power doctrine that distinguished between "air service" and "air force." Patrick himself became a staunch advocate for aviation and then moved to sway the opinions of his superiors. In alliance with Mitchell and other air strategists, Patrick pushed to define the roles and missions of the Air Service. The fight for a part of the continental defense mission was his attempt to gain a definite function for which the Air Service would be solely responsible. Patrick also pushed for and achieved recognition that the Air Service was more than just an auxiliary



arm of the armies. By the time he retired, most army officers recognized the air arm as a vital part of military operations. In so doing, he promoted the idea that aircraft could perform missions separate from ground operations.

Secondly, Patrick struggled to establish the Air Service as a fully functioning institution. He concentrated his efforts on the areas of funding, personnel, and equipment. He fought for control of the budget and increases in the amounts. In the area of personnel, he worked to change policies that limited numbers and sources and then stifled the careers of his officers. In addition, he fought to keep his men on equal terms with officers from the other army branches. Finally, Patrick fought for revision of the promotion system that kept Air Service personnel at the bottom of the list. Equipment was the final area of concern. Patrick concentrated on development of new designs, getting the money to procure them in adequate numbers, and having flexible procurement rules that would allow him to support the struggling civilian aviation industry.

Mason Patrick should be recognized for his contributions in the foundation of U.S. air power. He reversed the downward post-war spiral toward organizational chaos and put the Air Service on a firm footing. His management expertise led him to fight for the basics of money, manpower, and materiel. At the same time, he expanded the base of support for military aviation by pushing the development of civil aeronautics. The nation as a whole benefited from Patrick's efforts. Finally, he moved to insure continued growth in the future. Acceptance of the airplane as a part of the defense structure was only the first step toward eventual autonomy.

Mason Patrick made significant contributions to laying the foundation of today's Air Force. His leadership, organizational and managerial skills made it possible for airmen

to continue the spread of the gospel of air power. Without Patrick, the advances aviation made in the 1920's and the following years would have been long delayed. Today's officers can gain great insights on institutional politics and personnel leadership by studying Mason Patrick's accomplishments.

## BIBLIOGRAPHY

### I. PUBLIC RECORDS AND DOCUMENTS, UNPUBLISHED

- Colorado Springs, Colorado. United States Air Force Academy Library.
- "Annual Report of the Chief of the Air Service." (annually, 1921-1925). "Annual Report of the Chief of the Air Corps." (annually, 1926-1927). Microfilm.
- Fort Rucker, Alabama. United States Army Aviation Museum. Scrapbook of personal papers of Major General Mason Patrick.
- Montgomery, Alabama. Maxwell Air Force Base. United States Air Force Historical Research Agency.  
Call Number 167.611-x Personal Papers of Maj Gen Mason M. Patrick.  
Washington, D.C. The National Archives.  
Record Group 18 Records of the Army Air Forces  
Entry 166  
Entry 228/229
- Record Group 80 General Records of the Department of the Navy, 1798-1947.
- Record Group 165 Records of the War Department General and Special Staffs.
- War Plans Division Numerical File.

### II. PUBLIC RECORDS AND DOCUMENTS, PUBLISHED

- U.S. Congress. House. *Congressional Record*. Vol. 67, parts 7-10.
- U.S. Congress. House. Committee on Appropriations. *Hearings on War Department Appropriations Bill, 1923*. 67th Cong., 1st Ses., 1922.
- . *Hearings on War Department Appropriations Bill, 1924*. 67th Cong., 2nd Ses., 1923.
- . *Hearings on War Department Appropriations Bill, 1925*. 68th Cong., 1st Ses., 1924.
- . *Hearings on War Department Appropriations Bill, 1926*. 68th Cong., 2nd Ses., 1925.
- . *Hearings on War Department Appropriations Bill, 1927*. 69th Cong., 1st Ses., 1926.
- . *Hearings on War Department Appropriations Bill, 1928*. 69th Cong., 2nd Ses., 1927.
- U.S. Congress. House. Committee on Military Affairs. *Hearings on Defense and Unification of Air Service*. 69th Cong., 1st Sess., 1926.

- . *Hearings on Air Corps Progress Under Five-Year Program*. 69th Cong., 2nd Sess., 1927.
- . *Hearings on H.R. 10147 and H.R. 12285 to Create a Department of Aeronautics, Defining the Powers and Duties of the Secretary Thereof, Providing for the Organization, Disposition, and Administration of a United Air Force, and Providing for the Development of Civil and Commercial Aviation, the Regulation of Air Navigation, and For Other Purposes*. 68th Cong., 2nd Sess., 1925.
- U.S. Congress. House. Select Committee of Inquiry into Operations of the United States Air Services. *Hearings on Matters Relating to the Operations of the United States Air Services*. 68th Cong., 1925.
- . *Report of the Select Committee of Inquiry into Matters Relating to the Operations of the United States Air Services*. House Report No. 1653. 68th Cong., 2nd Sess., 1925.
- U.S. Congress. Senate. Committee on Military Affairs. *Hearings on H.R. 10827: An Act to Provide More Effectively for the National Defense, Increasing the Efficiency of the Air Corps of the Army of the United States, and for Other Purposes*. 69th Cong., 1st Sess., 1926.
- . *Hearings on S. 2614: A Bill to Increase the Efficiency of the Air Service of the United States Army*. 69th Cong., 1st Sess., 1926.
- U.S. President. President's Aircraft Board. *Hearings Before the President's Aircraft Board*. Washington, D.C.: U.S. Government Printing Office, 1925.
- . *Report of the President's Aircraft Board*. Washington, D.C.: U.S. Government Printing Office, 1925.
- U.S. War Department. *Annual Report of the Secretary of War to the President*. (annually, 1922-1927). Washington, D.C.: U.S. Government Printing Office, 1922-1927.

### III. OFFICIAL STUDIES

- Army Air Forces Historical Studies: No. 39: Legislation Relating to the Air Corps Personnel and Training Programs, 1907-1939*. Washington, DC: AAF Historical Office, 1945.
- Army Air Forces Historical Studies: No. 50: Material Research and Development in the Army Air Arm, 1914-1945*. Washington, DC: AAF Historical Office, 1945.
- Craven, Wesley Frank and James Lea Cate, eds. *The United States Army Air Forces in World War II*. Vol. I: *Plans and Early Operations, January 1939 to August 1942*. Chicago: University of Chicago Press, 1948.
- Futrell, Robert Frank. *Ideas, Concepts, Doctrine: A History of Basic Thinking in the United States Air Force*. Maxwell Air Force Base, Alabama: Air University, 1971.

- Greer, Thomas H. *USAF Historical Studies No. 89: The Development of Air Doctrine in the Army Air Arm, 1917-1941*. Maxwell Air Force Base, Alabama: USAF Historical Division, Research Studies Institute, Air University, 1955; reprint, Washington, DC: USAF Office of Air Force History, 1985.
- Holley, Irving Brinton Jr. *Buying Aircraft: Matériel Procurement for the Army Air Forces*. United States Army in World War II Special Studies. Washington, DC: United States Army Center of Military History, 1964; reprint, 1989.
- McClendon, Robert Earl. *The Question of Autonomy for the U.S. Air Arm*. Maxwell Air Force Base, Alabama: Documentary Research Division, Air University, 1950.
- Mooney, Chase C. and Martha E. Layman. *Army Air Forces Historical Studies: No. 25: Organization of Military Aeronautics, 1907-1935*. Washington, DC: Historical Division, Assistant Chief of Air Staff, Intelligence, 1944.

#### IV. REFERENCE MATERIAL

- Cullum, George W., ed. *Biographical Register of the Officers and Graduates of the U.S. Military Academy, vols. I-VIII*. Chicago: R.R. Donnelly & Sons Company, The Lakeside Press, 1940.
- James, Edward T., ed. *Dictionary of American Biography*. Supplement 3. New York: Charles Scribner's Sons, 1973.
- DuPre, Flint O. *U.S. Air Force Bibliographical Dictionary*. New York: Franklin Watts, Inc., 1965.
- National Cyclopedia of American Biography*. XLIV. New York: James T. White & Company, 1962.
- Pisano, Dominick A. and Cathleen S. Lewis, eds. *Air and Space History, An Annotated Bibliography*. National Air and Space Museum. Smithsonian Institution. New York: Garland Publishing, Inc., 1988.
- Who Was Who in America*, vol. I. Chicago: A.N. Marquis Company, 1943.

#### V. BOOKS

- Air Power and Modern Warfare*. United States Air Force Academy: Department of History, 1977.
- Brown, Jerold E. *Where Eagles Land: Planning and Development of U.S. Army Airfields, 1910-1941*. New York: Greenwood Press, 1990.
- Copp, DeWitt S. *A Few Great Captains: The Men and Events That Shaped the Development of U.S. Air Power*. Garden City: Doubleday & Company, Inc., 1980.
- Davis, Burke. *The Billy Mitchell Affair*. New York: Random House, 1967.

- Foulois, Benjamin D. and Carroll V. Glines. *From the Wright Brothers to the Astronauts: The Memoirs of Major General Benjamin D. Foulois*. New York: McGraw-Hill, 1968.
- Freudenthal, Elsbeth E. *The Aviation Business: From Kitty Hawk to Wall Street*. New York: The Vanguard Press, 1940.
- Glines, Carroll V., Jr. *The Compact History of the United States Air Force*. New York: Hawthorn Books, Inc., 1963.
- Goldberg, Alfred, ed. *A History of the United States Air Force, 1907-1957*. Princeton: D. Van Nostrand Company, Inc., 1957.
- Holley, I.B. *Ideas and Weapons: Exploitation of the Aerial Weapon by the United States in World War I*. New Haven: Yale University Press, 1953.
- Hudson, James J. *Hostile Skies: A Combat History of the American Air Service in World War I*. Syracuse: Syracuse University Press, 1968.
- Huie, William B. *The Fight for Air Power*. New York: L.B. Fischer, 1942.
- Hurley, Alfred F. *Billy Mitchell: Crusader for Air Power*. Bloomington: Indiana University Press, 1975.
- Levine, Isaac Don. *Mitchell: Pioneer of Air Power*. New York: Duell, Sloan, and Pearce, 1943.
- Maurer, Maurer. *Aviation in the U.S. Army, 1919-1939*. Washington, D.C.: United States Air Force Office of Air Force History, 1987.
- Mitchell, William. *Winged Defense*. New York: G.P. Putnam's Sons, 1925.
- Patrick, Mason M. *Military Aircraft and Their Use in Warfare*. Philadelphia: The Franklin Institute, 1924.
- The United States in the Air*. Garden City, NY: Doubleday, Doran, 1928.
- Rutkowski, Edwin H. *The Politics of Military Aviation Procurement, 1926-1934*. Columbus: Ohio State University Press, 1966.
- Schlesinger, Arthur M. *The Crisis of the Old Order, 1919-1933*. Boston: Houghton Mifflin Company, 1957.
- Shiner, John Frederick. *Foulois and the U.S. Army Air Corps, 1931-1935*. Washington, DC: United States Air Force Office of Air Force History, 1983.
- Weigley, Russel F. *History of the United States Army*. New York: MacMillan Publishing Company, Inc., 1967.

## VI. NEWSPAPERS AND PERIODICALS

- Aerial Age Weekly*, then *Aerial Age*. 1921-1923.
- Aero Digest*.

*Air Service Newsletter*, then *Air Corps Newsletter*

*Army and Navy Journal*. June 1921-September 1925, vols. LIX-LXII.

*Aviation*. 1921-1927.

*National Aeronautics*. 1921-1927.

*New York Times*. 1886-1927.

*U.S. Air Services*. 1921-1927.

## VII. ARTICLES

Bonney, Walter T. "Chiefs of the Army Air Force." *Airpower Historian*, VII (July 1960), pp. 129-142.

Cate, James L. "Development of Air Doctrine, 1917-1941." *Air University Review Quarterly*, I (Winter 1947), pp. 11-22.

Dargue, Herbert A. "Training a Major General to Fly." *U.S. Air Services* (September 1923), pp. 18-22.

Eaker, Ira A. "As I Remember Them: Air Chiefs Patrick and Fechet." *Aerospace Historian* 20 (June 1973), pp. 57-61.

Rae, John B. "Financial Problems of the American Aircraft Industry, 1906-1940." *Business History Review* (Spring 1965), p. 102.

Stratemeyer, George E. "Administrative History of U.S. Army Air Forces." *Air Affairs*, I. No. 4 (Summer 1947), pp. 510-525.

Westover, O. Maj Gen, "The Distinguished Personal and Military Record of Maj. Gen. Mason M. Patrick," *U.S. Air Services*, Aug 1938, pp. 11-14.

Williams, Edwin L., Jr. "Legislative History of the Air Arm." *Military Affairs*, XX (Summer 1956), pp. 81-93.

## VIII. UNPUBLISHED MATERIALS

Cram, Ralph W. "An Amateur Aviator's Vacation, and Some Conclusions Drawn Therefrom." A paper read before The Contemporary Club, Davenport, IA, 29 Dec 1924. National Archives RG 18, Entry 228, Box 1.

Ransom, Harry H. "The Air Corps Act of 1926: A Study in the Legislative Process." Unpublished Ph.D. dissertation, Princeton University, 1954.

Tate, James P. "The Army and Its Air Corps: A Study of the Evolution of Army Policy Towards Aviation, 1919-1941." Unpublished Ph.D. dissertation, Indiana University, 1976.